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ABSTRACT

A framework is proposed for the rigorous and continuing exercise of quality control in teacher education. The major focus is on the individual measures of quality control which can be exercised at eight critical points in the preparation and practice of a teacher: (1) college admission; (2) admission to teacher education programs; (3) student teaching and other professional field experiences; (4) completion of preservice preparation and institutional recommendation of candidates for initial certification; (5) state agency certification; (6) employment; (7) retention and tenure decisions--the role of inservice education; (8) continuing professional development--the recognition of the teacher-scholar. The major section of this paper is organized around these quality control points, and, within each of the eight subsections, seven basic questions are utilized to clarify the issues relating to each point: (1) What are the competencies, qualities, and characteristics associated with effective teacher performance expected as exit criteria from this point? (2) Which of these competencies, qualities, or characteristics can be developed or enhanced by the institution or agency primarily responsible for the quality control point with the time and resources available? (3) What are the entry requirements at this quality control point? (4) How can generic competencies associated with quality teacher performance be ensured while at the same time avoiding a narrow view of teaching? (5) What are the principal influences on the quality controls exercised? (6) With whom does primary responsibility for evaluation lie? and (7) What processes, mechanisms, and instruments are properly involved? A bibliography is appended. (MM)

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QUALITY CONTROL IN TEACHER EDUCATION: SOME POLICY ISSUES

DANIEL S. ARNOLD
Associate Professor and
Associate Dean for Teacher Education and Certification

GEORGE DENEMARK
Professor and Dean

ELIZABETH R. NELLI
Graduate Assistant
Department of Curriculum and Instruction

ANDREW ROBINSON
Assistant Professor and
Assistant Dean for Administration

EDGAR L. SAGAN
Associate Professor and
Associate Dean for Graduate Studies in Education

College of Education
University of Kentucky
Lexington, Kentucky

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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FOREWORD

For teachers to make a difference in the learning outcomes of students, it is incumbent upon the appropriate educational agencies to exercise quality controls which will ensure the effectiveness of teacher education. The decreasing demand for teachers, and the concurrent increasing demand for accountability which often reaches the courts--may act to facilitate the development of more stringent controls. This paper proposes "a framework within which a rigorous and continuing exercise of quality control in teacher education may take place." The authors are indeed reporting on a critical issue for the teacher education community.

Eight "key" quality control points for the individual are noted: college admission, admission to teacher education programs, student teaching and other professional field experience, completion of preservice preparation and institutional recommendation of candidates for initial certification, state agency certification, employment, retention and tenure decisions (the role of inservice education), and continuing professional development (recognition as a teacher scholar). Several questions are considered at each of these control points.

Effective quality control in teacher education is seen to require a coordinated, continuing effort of higher education, school systems, governmental agencies concerned with education, the organized profession, and the individual teacher or teacher candidate.

In joining with the ERIC Clearinghouse on Teacher Education in the publication of this paper, the AACTE is seeking to promote considerable discussion of a major question facing educators. The viewpoints expressed by the authors do not necessarily reflect those of the AACTE, nor of the National Institute of Education, which provides major funding of the Clearinghouse. Educators must know the issues facing them and the options which are open. They then can be in a better position to assume a leadership role in addressing the pressing problems which face our field today.

We acknowledge with appreciation the work of the authors of this monograph: Daniel S. Arnold, Associate Professor and Associate Dean for Teacher Education and Certification; George Denemark, Professor and Dean; Elizabeth R. Nelli, Graduate Assistant, Department of Curriculum and Instruction; Andrew Robinson, Assistant Professor and Assistant Dean for Administration; and Edgar L. Sagan, Associate Professor and Associate Dean for Graduate Studies in Education--all at the College of Education, University of Kentucky, Lexington. We note also with appreciation the work of Lana Pipes, Clearinghouse editor, in doing the technical editing required to move from manuscript into completed monograph.

Our hope and expectation is that this publication will be a valued part of your collection of the literature of education.

March 1977

Edward C. Pomeroy, Executive Director
American Association of Colleges for Teacher Education

Karl Massanari, Director
ERIC Clearinghouse on Teacher Education

I. A CONTEXT FOR QUALITY CONTROL IN TEACHER EDUCATION

Do teachers make a difference? The answer to that basic question is vital to the process of quality control in teacher education. If the influence of teachers on the learning outcomes of children and youth is negligible in relation to other influences, the need is reduced for effective quality controls in teacher preparation, certification, employment, and retention. If, on the other hand, schools and teachers are seen as key influences on the achievement of children and youth, effective quality control in teacher education becomes a matter of critical importance.

Answers to the question of teachers' impact on learning have not been uniform. Jencks and others (1972) have questioned the ability of the schools and teachers to overcome the negative effects of social and economic deprivation. In a highly influential report, Equality of Educational Opportunity, Coleman (1966, p. 325) and his colleagues concluded that "schools bring little influence to bear upon a child's achievement that is independent of his background and general social context."

Taking issue with such views, however, then USOE Associate Commissioner Davies (Office of Education, Bureau of Educational Personnel Development, 1970, pp. 21-22) introduced a publication reporting the best of recent research on factors influencing pupil achievement, stating that "teachers do make a difference--both positive and negative--in how a student performs, in his level of achievement, in his behavior, and in the values he acquires. If teachers did not make a difference, we would be satisfied with schools run and operated wholely by machines."

Although holding that currently we could not make any sort of meaningful quantitative estimate of the effect of teachers on student achievement, Mood (1970, pp. 21-22) pointed out that there are "dedicated teachers who are determined that every last child in the class will learn the material expected of him," as well as "uninspired teachers" who bring about some small degree of learning, "loving teachers who bring life saving affection" to hurt children, "unfeeling teachers who injure children" through humiliation, "brilliant teachers who can convert a child's interest in almost anything into hard work" in needed areas, "idiots who destroy children's confidence," and "saints who somehow civilize little demons that everyone else has given up on as hopeless." He concluded that "some teachers make a huge difference; some teachers make a large or medium or a small difference; a few teachers may even do more harm than good but all teachers desire to make a big difference." They need to find out how to do so.

Calling for attainment of professional status for teaching, AACTE's Commission on Education for the Profession of Teaching (Howsam et al., 1976, p. 15) held that "every moment in the lives of teachers and pupils brings critical decisions of motivation, reinforcement, reward, ego enhancement, and goal direction. Proper professional decisions enhance learning and

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NOTE: The authors wish to acknowledge with gratitude the contributions of Brownie Watkins and Maude O'Neill to the development of this paper. Both are graduate students and assistants at the University of Kentucky. Their literature search and review over a broad range of topics greatly facilitated the work of the writing group.

life; improper decisions send the learner toward incremental death in openness to experience and in ability to learn and contribute. . . . Teaching is definitely a matter of life and death. It should be entrusted only to the most thoroughly prepared professionals."

Forbes (October 1976), a staff member of the project on National Assessment of Educational Progress carried on by the Education Commission of the States, suggested in a recent conversation that the manner in which achievement data are collected by that agency lends support to the notion that schools and teachers indeed make a difference. Data collected on children of specified ages regardless of the grade in which they are enrolled in school show significant learning differences among children of the same age who are at different grade levels. These data point clearly to school-related influences.

Recently, Bloom (in: Fiske, New York Times, June 9, 1976), while acknowledging that because of their background many children come to school lacking in the "prerequisites" of learning, concluded that virtually all children can be taught everything that the schools have to offer so long as appropriate methods are used.

Using Student Outcomes To Judge Teacher Effectiveness

If teachers do represent a significant influence on the learning outcomes of students, there is a compelling logic which urges us to base judgments of teacher effectiveness upon the learning outcomes of those they instruct. Logic further suggests that an analysis should be made of teacher performance in the classroom to uncover those elements of performance that have been shown to be effective and to permit focus on the development of those elements in teacher preparation programs. In addition, it is reasonable to require that some "safe" level of proficiency in those elements be demonstrated by teacher candidates before they are recommended by their preparing institution for an initial license, certified by the state education agency, or considered for employment by a local school system. This position can be further extended to require of the teacher some demonstration of maintenance of an appropriate level of effectiveness--or even an acceptable degree of improvement--by a school system for reemployment and tenure, by a state agency for continuing certification, and by the organized profession for continued membership.

Some Problems

Realistic Assessment. Unfortunately, there are serious problems associated with implementing this logically sound approach. First, teacher effectiveness accounts for only a portion of the learning outcomes of children and youth. As already noted, Coleman, Jencks, and others have emphasized what they view as the overriding influence of home and neighborhood environments. How much of children's learning (or lack of it) is a function of social and attitudinal factors and how much may be attributed to school and teacher variables?

Some promising research efforts have begun to assess more realistically school and teacher variables. McDonald (Spring 1976) suggests that we can hypothesize logically the influence of teachers as accounting for about 25 percent of the variance in pupil achievement. Evaluating the

impact of teacher performance in a context of that 25 percent of pupil achievement variance, rather than against the total variance generated, provides a set of expectations for teacher effects which are more modest and more realistic.

Background Characteristics. A second complication in judging teacher effectiveness by student outcomes results from the reality that student performance in disparate curriculum areas is differentially affected by background characteristics. A recent International Education Association (IEA) cross-cultural study of student achievement (Berliner, 1976, p. 9) suggested that student characteristics such as intelligence and social class "are so powerful in accounting for student achievement in subjects like reading and social studies that there may not be enough variance unaccounted for in the performance of students to attribute to the influence of teachers." In other curriculum areas such as physics, chemistry, French, Spanish, and geometry, student characteristics account for much less variance. According to Berliner, this fact does not mean that socioeconomic status and intelligence are unrelated to performance in science, foreign language, or mathematics, but rather that their influence is less, with more variance left to attribute to school and teacher effects.

Simultaneous Evaluation. A third problem in attempting to link teacher effectiveness to student performance is that several major outcomes must be evaluated simultaneously. According to Peck (1976, p. 18) such variables include "subject matter mastery, coping skill, handling problems resourcefully, development of study work habits, sustained interest in further learning, and realistic self-respect."

Teacher Patterns. A fourth complication is that teacher effectiveness is often not stable from one subject to another or from one observation period to another. Berliner (1976, p. 11) estimated that the mean correlation between measures of teacher effectiveness obtained two or more times is about .30. A study (Brophy, 1973) focused on predominantly primary-age children tested with standardized reading and mathematics achievement tests, for example, reported that 28 percent of the teachers were consistent in their effects on students three years in a row, while 49 percent were consistent over time in the patterning of their residual scores.

Student Reactions. A fifth factor complicating the assessment of teacher effectiveness on the basis of student outcomes stems from the reactions of individual students to different kinds of teaching. Peck (1976, p. 19) suggests that there are important variances in the dynamics of the learning process among students of unlike cultures. No single style of teaching works equally well with all of them. He further holds (p. 19) that "the emotional adjustment of students often has a powerful effect on their learning." Berliner (1976, p. 10) maintains that all teachers, knowing that some of the things they do will not be effective with some of the children they teach, "customize their behavior as best they can, to fit the individual styles of students." It seems clear that designing more effective schooling and teaching requires a model that allows for the

interacting effects of teaching strategies and student characteristics on the multiple outcomes of instruction.

Student Perspective. Another significant factor is the student's perspective of events that impinge upon him or her in the classroom. These might be events designed or structured by the teacher, or events generated by broader community or societal circumstances, such as tensions associated with anti-busing demonstrations. Berliner (1976, pp. 10-11), suggesting that "researchers do not know how much of what is called skilled teaching is even perceived by the learner," posits that students exposed to "variables they cannot perceive or to variables they believe to be unimportant" may well be unaffected by them, a position supported by Katz (in press). In addition, significant current events may so capture students' interests or may so influence the atmosphere in which learning is to take place that what would under other circumstances be perceived as important and worthy of effort may become, to the students, peripheral.

A related point involves the maturity level of the student. Instructional efforts associated with evaluating types of data or sources of evidence, for example, may be effective with students at one maturity level and quite ineffective at another. Thus a teacher's proficiency might not be supported by student outcomes in a given instance because of variations in student maturity, gaps in previous learnings that prevent the student's making use of specific skills needed in the task, or distractions generated by the emotional press of other events.

Student Effect. These variables suggest an additional factor, the effect of students' behavior on the behavior and performance of teachers. Teachers play their roles differently in relation to variations in student behavior. Such a variation in roles may be viewed as a virtue in the sense that it permits teacher accommodation to pupils. Conversely, it also represents a disadvantage if one is attempting to obtain a stable measure of what a teacher is capable of doing.

Behavior Identification. Still another difficulty is associated with the identification of teacher behaviors amenable to direct observation and tallying, in contrast to behaviors dependent upon inference and rating.

Institutional Support. A ninth complication associated with determining teacher effectiveness by student outcomes relates to institutional supports or obstacles. For example, a teacher with both the disposition and the competence to do an effective job of teaching by providing individualized or personalized instruction may find that the system in which he or she functions is unsympathetic or actively hostile to such efforts. The same teacher in another school or community context might be able to induce significant student learning outcomes because of the presence of strong social or institutional supports.

Time Factor. A final difficulty involved with using student outcomes in the process of controlling quality in teaching and/or teacher preparation stems from the time factor involved in such measures. For prospective teachers engaged in a preservice preparation program, significant student outcomes are likely to become discernible long past the deadline for

recommending a student for initial certification and employment. Some of the most significant strengths or deficiencies of teachers working full time in classrooms will not be discernible at the conclusion of a teaching unit or school year, but only at some later point.

Research Linking Teaching and Learning

In spite of the many difficulties noted, a comprehensive review of research on teacher effects (Rosenshine and Furst, 1973, pp. 154-58) identified eleven categories of teacher behaviors apparently linked to student achievement. Five of the categories identified had strong research support; those were clarity, variability, enthusiasm, task-oriented behaviors, and student opportunity to learn criterion material. The remaining six were judged to have weaker support in research and were: use of student ideas and general indirectness, criticism, use of structuring comments and types of questions, probing, and level of difficulty of instructions.

From the Coleman report, perhaps the most extensive attempt ever made at assessment of the nation's entire educational system, as well as from studies by Bowles (1969), Bowles and Levin (1968), Hanushek (1968), and Guthrie et al. (1969), the teacher's verbal ability is identified as the most significant school variable in explaining student achievement. Guthrie (1970, p. 37) suggests that we need to view teachers' verbal ability, however, as a proxy measure for a number of related skills and qualities—"finding means to motivate students, adapting materials to their ability levels, and communicating in ways which make the subject matter more understandable"--rather than considering it a single factor.

As Haberman (1972, pp. 14-16) and others suggest, attempts at relating these factors to success in teaching often produce a "lack of validity" conclusion. Perhaps instead of examining single criteria for their validity, however, we need to examine in greater depth the potential of a cluster of criteria. If, as is suggested by a recent study of teacher education in Ohio (Ryan, Kleine, and Krasno, 1972, p. 22), "criteria should be consistent with the goals of teacher preparation programs" and should include "a measure of intellectual competence, ability to succeed in academic course work, facility in dealing with children, and commitment to the teaching profession," then why not employ a cluster of criteria that relate to those characteristics? Since the task of the teacher emphasizes communication and a number of studies have pointed to the importance of the teacher's verbal ability as a "proxy" for a cluster of teacher abilities, why not include that element in the cluster of components to be considered, with admissions and retention decisions linked to those candidates whose combined indicators show greatest potential?

This section began by raising the issue of whether schools and teachers make a difference in the learning of children and youth. Although opinions differ regarding the significance of school impact, there seems to be an increasing disposition to assess school and teacher influence more realistically than in the past. There is also the possibility, at least, that an enhanced appreciation of social and cultural factors by teachers and other school personnel may greatly improve the capacity of formal educational efforts by utilizing home and neighborhood as allies, as suggested by Bronfenbrenner (1976), and by making the instructional and curricular adaptations which such understandings suggest.

Educators' Ambivalence Toward Quality Controls

If teachers do make a difference in what children learn and how well they learn it, it is essential that the appropriate educational agencies exercise quality controls which will enhance the effectiveness of teacher education. Several current social realities, however, cause educators to approach such decisions with considerable ambivalence.

Accountability. In the first place, the press toward greater accountability by public institutions and public officials is growing. Constituents are demanding that educators in schools and colleges document the effectiveness of their programs as a basis for justifying continued or expanded support. The press for accountability leads quite naturally to a concern for programs that make a difference to the students.

Legal Challenges. A parallel societal trend affecting an increasing number of educators at every level is greater use of legal redress in instances where educational results do not match claims or where selection criteria cannot be demonstrated as relevant to desired outcomes. Recent court decisions, particularly Griggs v. Duke Power Co., encourage the questioning of admissions, licensing, and employment requirements which do not bear a clear relation to on-the-job demands.

Difficulty in Making Improvements. Educators in general and teacher educators in particular are presently confronted by a press for improved effectiveness and relevance. Coupled with the passing of an era of teacher shortages, this development necessitates an expanded and more rigorous program of selection and quality control in teaching and teacher preparation. At the same time, however, economic slowdowns, a growing disaffection of the general public with the benefits of education, and a rapid expansion of legal challenges to institutional practices and policies make such improvement efforts extremely difficult.

Decreased Demand for Teachers. The importance of quality control in teacher education is underscored by the dramatic change in supply and demand for teachers. Changes in the birth rate suggesting a continuing downward trend in numbers of school age children for the decade ahead, combined with the present limitation of resources and increasing community pressures for greater accountability, all suggest that teacher education is confronted by a strategic opportunity to reassess its responsibilities for quality control.

A New Demand for Quality Control. Our society has reached the end of an era when severe shortages of teachers on a nationwide basis resulted in nearly open admission to teacher preparation programs and minimal academic performance expectations. Gone are the days of employment of nearly all who actively sought teaching assignments after completing teacher preparation programs and of the utilization of temporary or emergency certificates. Parents, however, remain troubled by the failure of their children's schools and teachers to impart adequate levels of skill and understanding in such basic areas as reading and computation. Employing school officials still complain that beginning teachers are incapable of dealing with the

real problems of instruction and classroom management. Some college professors from academic fields still act as though elementary and secondary classrooms do not merit the strongest students and, indeed, seldom secure them. Teacher education graduates working in elementary and secondary school classrooms frequently register their own disaffection with the preparation they received. Criticisms thus continue that teacher education has not exercised quality control in personnel and program commensurate with the importance of the task of teaching.

Key Quality Control Points

This paper will propose a framework within which a rigorous and continuing exercise of quality control in teacher education may take place. Further, some of the critical issues involved and the major participants in the process will be identified.

Two major dimensions of quality control are considered in the pages which follow. The first and principal emphasis is upon the individual, that is, the teacher or teacher candidate. The second is upon the institutions associated with teacher preparation and considers program and staff evaluation and accreditation processes linked with institutional quality controls. Major focus of the paper, however, is upon the individual and a consideration of measures of quality control which can be exercised at eight critical points in the preparation and practice of a teacher:

1. College admission
2. Admission to teacher education programs
3. Student teaching and other professional field experiences
4. Completion of preservice preparation and institutional recommendation of candidates for initial certification
5. State agency certification
6. Employment
7. Retention and tenure decisions; the role of inservice education
8. Continuing professional development: recognition as a teacher-scholar

At each of these critical control points the following questions serve to clarify the issues needing to be addressed:

1. What are the competencies, qualities, characteristics associated with effective teacher performance expected as exit criteria from this quality control point?
2. Which of these competencies, qualities, or characteristics can be developed or enhanced by the institution or agency primarily

responsible for the quality control point with the time and resources available?

3. What competencies, qualities, or characteristics fundamental to further professional development should candidates already possess that can, therefore, constitute entry requirements at this quality control point?

4. How can generic competencies associated with quality teacher performance be ensured while at the same time avoiding a narrow, monolithic view of teaching that neglects important variables?

5. What are the principal influences on the quality controls exercised?

   a. Professional expectations
   b. Community perceptions
   c. Institutional contexts
   d. Supply and demand realities
   e. Available resources
   f. Adequacy of the data base for the evaluative criteria to be employed
   g. Legal challenges

6. With whom does the primary responsibility for evaluation lie? What other agencies, institutions, or individuals are appropriately involved?

7. What processes, mechanisms, instruments are appropriately involved?

The next and major section of this paper is organized around the eight quality control points identified. Within each of those eight subsections an effort has been made to utilize the seven basic questions as stimuli for the identification of important issues. In the interest of conserving space the same set of questions has not been repeated in each subsection but should be seen as implicit in each.

Bases for Establishing Selection Criteria

Research Data. A significant problem in establishing appropriate quality controls is the determination of the basis upon which criteria are to be selected. Clearly, research data provide the preferred basis upon which quality controls should be established. Unfortunately, the research data base remains limited and inadequate to meet the press of need for teacher education quality controls. The complexity of the problems confronted, variations in individuals and in community expectations, and a range of other factors suggest that if we are to rely only upon quality control measures which are validated by research findings, we will be forced to maintain the largely unselective system which presently characterizes American teacher education.

Professional Consensus. A second appropriate but neglected basis for identifying quality control measures is that of professional consensus. There is some evidence from court cases involving other professional groups that courts will in fact give consideration to the validity of positions which have been established by substantial professional consensus. Here, however, the problems confronting teaching in gaining recognition as a profession cause considerable difficulty. In many cases involving educational matters, the courts have failed to accept the existence of expert professional opinion and instead have ruled on the basis of a position appropriate to "a concerned parent."

A serious obstacle to the establishment of the concept of a profession and professional judgment has been the tendency for teacher educators to avoid the obligation to seek out some main strands of professional consensus. We have sometimes viewed our differences as evidences of a flourishing democratic diversity. Endless program variations have been tolerated and sometimes even encouraged on the ground that they represent institutional responses to individual and community differences. Instead, they too often represent little more than a reluctance to confront differences and a desire to escape the reality of failures in communication. More than ever it seems incumbent upon professional educators to seek out threads of agreement regarding important qualities in teaching and teacher education. Those around which substantial consensus can be achieved are likely candidates for systematic and rigorous research efforts that must become the ultimate basis for professional decisions.

Logical Extension. A third source of elements to be included in teacher education quality controls is the process of logical extension. Some elements in quality control measures may not yet be confirmed through research data and lack as yet the achievement of substantial professional consensus. They may still be worthy of inclusion because they represent a logical extension from significant elements in a teacher's role to training program components or personal qualities. For example, it seems clear that the role of elementary and secondary school teachers is essentially one of providing general education rather than specialized learnings. If one accepts this view of the teacher's function, it follows logically that the general education received by prospective teachers is of special significance.

Validations. Another perspective on the bases for establishing quality controls is identified by William Robinson (School Administrators Committee, 1975, pp. 4-5), Associate General Counsel for the Equal Educational Opportunities Commission, in referring to three kinds of validations that are suggested by Civil Rights Act, Title VII, guidelines. Robinson speaks of criterion related validation, content validation, and construct validation. Criterion related validation involves "constructing a statistical relationship between test performance and work performance as measured by some previously defined performance criterion." Content validation uses a "subjective comparison" between tests (or "samples of work") and job rather than statistical correlation. A test, however much it resembles a job, may, in fact, not really be like it. Construct validity utilizes a relationship between physical or mental traits (called constructs) needed on the job and a test which claims to measure those traits.

Combinations of Elements. If we are not to abandon all efforts to exercise quality controls in the preparation, certification, employment, and tenuring of teacher personnel, it seems clear that we will need to incorporate an appropriate mix of elements which have logical and experiential bases as well as those growing out of established research findings. The teaching profession, unlike medicine, law, and some of the better established and more mature professions, has yet to achieve sufficient stature to permit broad professional judgments to be utilized as significant data in legal decisions. Frequently, professional judgments regarding educational policies are so diverse and there is so little consensus apparent that both legislative and judicial bodies are inclined to dismiss professional counsel as contradictory and ambiguous.

We are clearly not recommending a forced monolithic view of the factors relevant to effective quality control in teacher education. We are, however, suggesting that the uncritical acceptance of diversity among many teacher educators has at times made for shabbiness of program and outcome and has reduced the capacity of professional educators to influence the public and those who legislate and interpret policies affecting education.

The Need for Partnership in the Quality Control Process

The process of improving the quality of teacher education involves more than the individual training institutions. At its best, the process of quality control is a sequence of decision-making points that begins with admission to the university or college and continues through several stages, including those of professional development and career improvement, in order to produce teacher-scholars who continue their lifelong education and learning experiences. The final report of the Higher Education Task Force on Improvement and Reform in American Education (Denemark and Yff, 1974) emphasizes the necessity of partnership in teacher education as a key element in educational reform through teacher education. Viewing the educational system as a "complex social form" that involves reactive interrelationships, the Task Force maintains that the degree to which education responds to social needs will depend largely on the extent to which individuals are motivated toward a common good. Teacher educators, therefore, must become more active themselves in improving the practice of education at all levels, and must also involve more people with other education-relevant orientations in a new complex or partnership--"a synergy of concerned individuals"--where education, as part of the larger social system, functions responsively and effectively in a symbiotic relationship with the various individuals and groups. How to implement this synergy becomes a critical issue.

In Summary

We have spoken of the importance of education to our society and the importance of competent teachers to the quality of education. Many other social or cultural factors affect the education of youth, but the role of schools and of teachers is vital. Such a role demands rigorous quality control, both in terms of the selection of personnel and in the programs designed to make maximal use of their potential. The teaching profession has an unusual opportunity at the present time to be more selective in

whom it accepts into its ranks and more effective in enhancing the professional competencies of those already employed. As noted by the AACTE of New York State (1974, p. 7), the times now "provide an opportunity to take a pro-active stance and select into the profession people who not only demonstrate competence in the teaching field, but also who demonstrate a capacity to think, to imagine, to analyze, to reflect, to lead, and to communicate."

The purpose of the remainder of this paper is twofold: to suggest in more detail some of the promising possibilities for exercising effective quality control in teacher education, with respect both to individuals and to institutions; and to identify some of the issues that will confront teacher educators and others interested in the quality of teaching and teacher education.

Basic to the remainder of this report is a conviction that effective quality control in teacher education requires a coordinated, continuing effort of higher education, school systems, governmental agencies concerned with education, the organized profession, and the individual teacher or teacher candidate. Although each of eight quality control points is discussed in turn, the quality control measures exercised at one point enhance or invalidate the success of measures at each of the others. Perhaps the most exciting promise for the future lies precisely in this interdependence of quality control efforts from the beginning to the culmination of the careers of professional teachers.

II. ISSUES RELATING TO QUALITY CONTROLS FOCUSED ON THE INDIVIDUAL

A. COLLEGE ADMISSION

Admission at the Freshman Level

By far the largest number of students seeking to enter professional teacher education programs in this country are enrolled in public institutions of higher education, most of which have "open-enrollment" policies. These institutions may vary procedures for entry of marginal students, some requiring "delayed" admission or "early-semester" admission for high school graduates whose records and tests suggest a low probability of academic success. However, at the point of entry into college at the freshman level, most of those institutions which produce the largest number of teacher education graduates are required either by law or by regulation to accept any graduate of an accredited high school within that state who presents the necessary credentials—having, of course, completed appropriate college entrance exams, health forms, personal information data sheets, or other locally required information for admission to the freshman class.

The use of "delayed" or "early-semester" admission is a measure that seems intended either to provide short term instruction in basic skills which may enhance the probability of success of the marginal student, or to communicate to the entering student the odds against surviving academically at that institution. In any case, for the institutions charged with the preparation of the greatest number of future public school teachers, the opportunity for selective admission at the freshman level class is substantially nil.

Private institutions and some public colleges are not constrained by open-admissions policies, although they too face the problem of acquiring a data base and information relative to an applicant's likely future success as an education professional. Essentially, these institutions deal with college entrance exam scores, recommendations from school administrators or teachers, and self-reported data from the student.

The exit from this control point is regarded—for the purposes of this paper--as formal admission to a Teacher Education Program. In most institutions, this process occurs between the third and fifth semester of the student's academic career. During these initial semesters, students concentrate upon general education requirements and pre-professional courses. Typically they have little contact with the professional college, a practice which many teacher educators believe requires remediation.

Exit Criteria at This Control Point

The generic competencies, qualities, or characteristics that the student should possess at the end of this phase of preparation can be grouped into three main areas, those of general education, subject-matter competence, and knowledge about schools.

General Education. A strong liberal education preparation will enable classroom teachers to serve as effective purveyors of the culture. They should have acquired the characteristics of a scholar, and reflect excitement about learning in many areas. They should be familiar with a broad continuum of ways of knowing. They should have developed skills to a high degree in both oral and written communication. One state's certification requirement (Division of Teacher Education and Certification, Kentucky Department of Education, 1976, pp. 37-38), borrowing heavily from the NCATE accreditation standards, calls for general education programs which contribute to the teacher education students' having fulfilled the following objectives:

1. Achieving personal fulfillment through

   a. Attaining optimum physical and mental health.

   b. Clarifying moral and aesthetic values.

   c. Developing creative expression.

2. Developing understanding and skills in symbolics of information.

   a. The ability to speak, read, and write English fluently, accurately, and critically, and

   b. Additional understanding and/or performance capability in at least one area of symbolics of information, such as mathematics, computer science, logic, linguistics, communications (verbal and nonverbal), or a foreign language.

3. Understanding the natural and social environments.

   a. A basic understanding of how data, hypotheses, and laws are related within the framework of scientific method;

   b. An appreciation of the interrelatedness and complexity of the natural world, and of human dependence of the living and nonliving environment;

   c. A general understanding of the social forces which shape present and future societies; and

   d. An understanding of the social system of the United States and of social systems which differ from your own.

Subject-matter Competence. Students should have made a strong beginning toward the development of subject-matter competence in their teaching fields. At this point in their undergraduate careers, students will have completed typically from one-half to two-thirds of the requirements of their academic or teaching major. Evidence regarding their potential effectiveness as purveyors of the central ideas and concepts of these

disciplines should be clear from the students' mastery of the key components of their own major fields of study.

Knowledge of Schools. A general familiarity with schools as organizations, education as a cultural process, and the nature and characteristics of children and adolescents functioning within school settings should be developed prior to formal admission to the professional program in teacher education. This knowledge should be gained primarily through first-hand experience. It will, at this point in students' preparation, serve not as a self-selecting device for potential teachers, but rather as an advance organizer for the professional programs which they hope to enter.

Development of Student Characteristics by the Institution

Supplementary Educational Experiences in General Education. Preentry data and personal counseling activities may suggest that the academic preparation of some students in specific areas is at such a low level that these students will not survive their early college semesters. The possibilities of longer-term support for students with academic deficits seem to be a growing national trend. Entering students, particularly shy, unaggressive freshmen, frequently need help in discovering and capitalizing upon those opportunities that are available. The professional education advisor should help the inexperienced student recognize specific academic deficits and discover avenues for remediation. Early attention to these problems rather than delayed attention at the time entry to the professional program is sought may result in the development of a competent professional who might otherwise have been lost. Such concern for the young student with promise is especially important in an era when the attraction and development of teachers from multicultural backgrounds is a high professional priority.

Student Experience with Children. Data available on entering students along with the insights gained through counseling may reveal to the professional advisor either a total lack, or a lack in breadth, of students' contact with children or adolescents. Experience in a diversity of settings with children of varying backgrounds and characteristics is a universally acceptable goal for teacher preparation programs. When this exposure has not occurred prior to college entry, the professional education advisor should make every effort to guide the future applicant to that end.

Additional Options. Other experiences which the advisor might encourage lower-division students to obtain include contact with different school organizations and models and with hitherto unfamiliar cultures or subcultures, areas of study with which they lack previous knowledge, and enrichment activities relevant to their chosen academic majors.

Educational Counseling. Potentially great benefits may be realized from investing the resources of the professional teacher educator in advisement and educational counseling of entering students before the students' formal application to the professional program. The initial self-selection of some students into teacher education does not represent an appropriate

choice. Close association with a practicing professional educator who provides counsel and guidance in the selection of both academic and nonacademic experiences may assist such students to determine whether they wish to pursue careers in professional education, or to choose an academic field or teaching area more suitable to their long-term interests and abilities.

A guidance counseling program for preprofessional students would undoubtedly result in the strengthening of all potential candidates. At a time of heightened professional concern for attracting, holding, and developing teachers drawn from a broader range of ethnic and cultural backgrounds, these measures to enhance the probability of student persistence and successful development are clearly justified.

Unfortunately, the basis for objective selection from among candidates for teaching positions is weak, and will remain so for years to come (Berliner, 1976). Until such time as we can be more precise in our predictions, the amount of subjective evidence accumulated in each case by experienced professionals can be a valuable asset in making final judgments for or against admission to teacher education programs. Closer association of the professional educator with those who seek admission to programs can supplement the basis for such judgments.

A significant problem that may be created by extensive involvement of lower-division students in required or strongly recommended activities is that of the demands made on the student who must hold a job. It is possible that such activities, unquestionably time-consuming, may reduce still further the number of minority students. Any institution undertaking such a guidance and counseling program should weigh carefully its advantages and disadvantages. Perhaps institutions should explore means for financial support of selected students in some of the required participatory experiences.

Professional Schools and the Beginning Student

Little actual screening for teacher education programs can occur at entry to college, both because of the paucity of information available to the institution which can be related to anything other than likelihood of general academic success, and because of institutional policies relative to open admissions. The professional college in which the student will seek to fulfill certification requirements, however, does have several responsibilities to the beginning student.

Expectations. Early in all students' academic sequences, the professional school makes readily available its expectations of abilities, both those that students should have when they seek entry into the professional program, and those they should exhibit when they reach the end of their formal preparation. These may include such specific expectations as a defined acceptable level of communication skills, ability to deal effectively with people, and flexibility and tolerance for dealing with those who differ culturally, socially, or physically from the applicant. An issue to be considered at this point is the nature of institutional and professional expectations, since priorities must be set. Are reasonable amounts of diversity provided in both sets of expectations while maintaining commitment to common objectives essential to every professional teacher?

Quality Control Processes. The sequence of screening events leading to graduation and certification, as well as specific criteria to be applied at each level, should be made clear to the student. The role of a guidance and counseling resource person in clarifying procedures and processes, and in suggesting alternatives, would seem to be critical. Developing other methods of providing information and direction before the student begins any professional preparation might well become a priority item in a professional school's concern with quality control.

Alternatives. If a professional school requires and expects certain skills and abilities of the student, particularly at the point of entry, the student should expect direction from the institution with regard to available programs and options that offer the means of developing these skills and abilities. Might compensatory training or additional experiences be necessary, in the judgment of the professional school, before the student meets its expectations? Should the student also have available for consideration various alternatives in coursework and/or experiential education which the institution, and other agencies, offer?

Legal Rights. The right of appeal provided within the institution should be communicated to students as early as possible. Third-person advocates, either administrative or academic, should be made known to them. The actual procedure of making appeals, clearly outlined in written form, should be readily available through the office of the student advocate or ombudsman. An issue of concern to both students and faculty is the seriousness with which the professional school and institutional administrators view student appeals, and the extent to which student grievances, as manifested in appeals, are recognized and reflected in an open exchange of ideas and in the possibility of changes in policy.

Generic Competencies

Interdisciplinary Communication. In most large teacher preparation institutions the level of communication between and among the various academic departments is low. Those offering general education courses for both elementary and secondary teachers exchange few ideas with those providing academic majors for secondary teachers. Such communication among groups is easier, and problems in this area are more logically approached, if public school teachers are viewed as being purveyors of the general culture ("culture" being defined here to include process as well as knowledge). At once the nature of the general education program becomes perhaps the most important single factor in the undergraduate preparation program. At the same time, unfortunately, it must be noted that the general education courses in many disciplines do not differ substantially from the introductory courses for majors in those disciplines where the goal is in-depth focus rather than breadth of knowledge.

Issues. Given the discrepancy between general education goals and academic course offerings, a number of issues become of critical importance. When, for example, do teacher-preparation students in particular gain a world-view of knowledge and social process? Where do they acquire the ability to interpret the knowledge and skills from various fields so

that explanation of complex interrelationships is possible? Can general education programs supporting teacher education needs be developed and sustained more effectively than they have been in the past? Until classroom teachers acquire the ability to integrate concepts, can we expect teaching performance that demands anything beyond mere factual regurgitation?

Mechanisms for Quality Control

Availability and Extent of Information. Given the limitation that institutions are usually unable to select from among all who present themselves as education majors, what options are available to teacher preparation schools seeking to improve the quality of graduates? The answer to that question lies partially in the information about the entering freshman available to the institution of higher education. Data usually available to the college include high school graduation certification, student self-reports, college entrance tests, and aptitude/personality tests.

Although a certification of graduation from an accredited high school executed by an appropriate public school official is required of most college entrants, in many cases the high school transcript reporting courses completed or academic level of performance is no longer obtained as part of the college admissions process.

Student self-reports of census-type information can be requested as part of the application process by individual institutions. Since the content will, in all likelihood, depend on local institutional requirements, its utility will vary, as will the completeness with which it describes entering freshmen and their characteristics.

All entering students will have completed one or more of the available and institutionally required college entrance testing programs, such as the ACT or the CEEB, while in high school. These testing programs are generally regarded by most teacher education faculty as achievement tests that may identify particular academic strengths and weaknesses and might be of use in organizing class placements, determining the most appropriate college major and course, and predicting success in individual college courses. In addition, however, these reports to the college contain a variety of information which may have utility to professional education advisors. The ACT Student Profile Report (American College Testing Program, 1976), for example, includes considerable detail concerning individual students' educational and occupational plans, self-perceived needs and educational interests, special interests in and out of class in high school, personal perceptions of strengths and weaknesses, as well as statistically predictable academic strengths and weaknesses specific to the institution and program selected.

Many institutions maintain programs of personality, aptitude, vocational, attitude, and interest testing at the point of institutional entry. Student pressures in the late 1960s and the various federal acts and regulations protecting privacy of students have, to some extent, eroded this practice. Significantly, universities were unable to demonstrate adequate justification for such programs; apparently they benefited neither students nor institutions. The types and subjects of the tests included in these programs have been almost endless, and include the Omnibus Personality Inventory, the Edwards Personal Preference Schedule, the Minnesota

Multiphasic, Cattell's 16 PF Scale, the California Psychological Inventory, the Alport-Vernon Study of Values, and the California F Scale, among others. Although the relationship of many of these scales to measures of teaching performance is well documented, few teacher education institutions managed to justify their use to the public.

Processes for Information Utilization. Although the application of tight screening procedures for college admission is frequently impossible, there is available on most entering freshmen both subjective and objective information which teacher education programs can use more effectively than they do now. Selectivity for the entering freshman student may take the form of closer contact between the student and the professional teacher education program. Time and resources of professional faculty can be made available so that entering students who indicate interest in teaching may be counseled both individually and in groups by persons with background in and knowledge of the preparation program the students seek to enter. Both beginning selection and the strengthening of training can commence with and develop from these early contacts.

Some of the activities that might be carried out within the framework of the counseling/advising relationship with lower-division students have already been suggested. The development of this mechanism, along with the improvement of general education programs, are two priority measures for consideration by teacher preparation programs that can make college experiences prior to admission to teacher education more meaningful as quality control factors in the selection and preparation of competent professionals.

B. ADMISSION TO TEACHER EDUCATION PROGRAMS

Selective Admission Policies

Current Practices. Since the early 1960s substantially all institutions preparing teachers at the preservice level have employed some system of selective admission at the point of entry into professional preparation sequence. According to Brubacher (1975, p. 6), 96 percent of all institutions utilize this mechanism. Although the list of all selective criteria used by institutions is a lengthy one, the median number of items in any system in operation at an individual institution is only six. Two observations regarding the criteria now commonly in use and their application cannot escape notice (Brubacher, 1975, pp. 2-7):

1. Of the half-dozen most used screening criteria, the most frequently used is college grades. Four more of these criteria are highly correlated with academic ability.

2. Most of the schools that were questioned refused admission to fewer than ten percent of the applicants for teacher preparation.

Basis for Utilization. In the mid-1960s, Gage (1964, pp. 33-41) stated that "the recruitment, selection, admission, retention, counseling, placement, and certification of teachers are all aimed at maximizing teacher effectiveness. Hence, in strict logic, at least, if not in actual

practice, all the aspects of student personnel work in teacher education must wait for their validation upon the definition and measurement of teacher effectiveness." Almost fifteen years later Berliner (1976, pp. 5-13) noted that the problem still exists, almost unchanged in nature and focus:

> The heart of performance-based teacher education, evaluation, and accountability programs is the establishment of empirical relationships between teacher behavior as an independent variable and student achievement as a dependent variable. But before researchers can adequately establish those relationships they need to deal with the problems of instrumentation, methodology, and statistics. . . . Time must be taken to consider the problems of how student background affects measures of teacher effectiveness, what subject matters should be examined, . . . what can be said about teachers, and how students monitor and interpret a teacher's behavior in ways which may or may not coincide with how educational theorists interpret the phenomena.

In view of our inability to offer strong evidence regarding relationships among teacher characteristics, behavior, and teaching performance, undoubtedly a daring and dramatic program of screening applicants on the basis of existing procedures cannot currently be justified.

Necessity for Selective Policies. Thin though the empirical base for measuring and predicting the effectiveness of performance of classroom teachers may be, it is our contention that the matter of choosing candidates for admission to professional preparation programs is too important to wait for "final" answers that might at some time in the future be forthcoming from large-scale and more effective research programs. It is disheartening to note Rosenshine's (1976, pp. 57-60) estimate that there are no more than twelve researchers or groups doing effective work relating to selective admissions. Yet each institution preparing teachers for work in the public schools assumes the responsibility for implementing a program of selection and retention and a commitment to assess the effectiveness of the screening effort. The importance of effective screening is reinforced by the current oversupply of applicants and the public demand for more efficient use of limited educational resources.

Preexisting Student Characteristics as Criteria

For decisions regarding initial admission to teacher preparation programs at the preservice level, institutions are largely restricted to what Cruickshank (1976, pp. 57-60) refers to as "presage" variables--those preexisting characteristics of teachers associated with individual personality, rather than process variables which teacher preparation programs concentrate upon producing. There would appear to be now in existence sufficient evidence to justify institutional design, implementation, and evaluation of admissions programs which include at least three presage variables: academic ability, character traits and attitudes, and personal interests related to major areas of study.

Academic Ability. Teachers in training are most likely to be successful if they are above average in academic ability and preparation in their teaching field. W. A. Skinner (1947) reported 23 separate researches into the relationship between teaching performance and intelligence quotients of teachers. Although small, all correlations were positive. Hellfritzch (1945), reporting on a factor analytic study, found general knowledge and mental ability combined to provide a positive predictor of performance. LaDuke (1945) subsequently noted that the intelligence of teachers correlated significantly with student gain scores. Using both tests of intelligence and tests of teacher knowledge in the content field, Rostker (1945) found similar correlations. Jones (1956) more recently discovered that "good" and "poor" teachers differed with respect to grade-point averages in professional courses and grade-point averages in courses in their majors. Carroll (1975) reported that students studying French as a foreign language scored significantly higher in reading and listening when the teacher's competence level in the language was higher, particularly when the teacher's superiority lay in the area of speaking skill.

Examining the low but positive correlations between teacher performance and general academic ability, Vernon (1965, pp. 140-49) claimed that higher correlations were obviated as a result of studying only part of the range of ability. He argued that "good" teachers with an IQ below 100 do not exist, and that the general ability (as measured by IQ) of the largest number of teachers is probably around 110. Hence studies of "poor" and "good" teachers really compare "good" with "very good." Simeon (1966) agreed with this general estimate of existing level of ability. If it is true that most teachers and teacher preparation candidates fall within a restricted range of IQ scores, then it is likely that conventional experimental study would consistently fail to reflect the true significance of the relationship between IQ and "good" teaching.

Traits and Attitudes. Teachers are more likely to be successful if they demonstrate flexibility and emotional stability as character traits and if they manifest favorable attitudes toward children. Hamachek (1969) found that the most successful teachers tended to be those able to range across a continuum of styles in contrast to less effective teachers, who always utilized the same interaction style. Harvey et al. (1966) had previously reported that a higher degree of teacher abstractness, as compared to rigidity, in teacher-pupil interactions at the kindergarten level produced more effective creativeness in learning among the children. Berliner and Tikunoff (1976) reached similar conclusions. Using ethnographic study methodology, they found suggestions that a large number of teacher characteristic variables, many associated with adaptability and stability, tended to differentiate between effective and ineffective teachers.

Best (1948) noted that the more effective teacher education candidates were those who showed special interests--in children and young people, in an opportunity to continue as lifelong learners in a given field, and in serving other persons. Brookover (1945) concluded that teachers with a high person-to-person interaction with their students tended to be rated high in effectiveness by both students and supervisors. According to Rossiter (1976) teacher orientation, rather than any specific teaching technique, was the critical factor in creating an effective

learning climate. These findings supported those of Ryans (1960), who reported a high positive correlation between productive pupil behavior and teacher characteristics of friendliness, understanding, originality, and stimulation.

Personal Interests and Academic Majors. There are differences among students in various teacher education majors which influence future teaching performance. Lien (1952) concluded that differences existed between teacher education students relating to the various curricula studied. He found these differences in interests and personal qualities as well as ability. A possible conclusion is that specific kinds of people are more effective teachers of particular types of subject matter, with teacher effectiveness directly related to personality type, interest, and the subject matter itself.

In a study employing a very large number of teacher education students, Wilk and Cook (1963) found significant univariate and multivariate differences among students in different teacher education curricula within the same institutions. Meisgeier (1965) studied the characteristics which might contribute to successful student teaching of handicapped children. When he compared the scores of subjects with published norms from standardized instruments, he concluded that teachers who are successful in teaching handicapped students are relatively unique with respect to motivation, adjustment, and energy. The findings of Yamamoto and Davis (1966) were consistent with the foregoing emphases upon differences among teachers that relate to subject and level taught. They found that majors in secondary fields differed from elementary majors on motivational scales.

Belcastro's (1975) multiple regression analysis study on all scales of the Edwards Personal Preference Schedule and the Strong Vocational Interest Blank reported discriminate function equations which could predict difference in likelihood of success between male and female teacher education students.

Implications. If an institution accepts as a minimum the three areas identified as having strong potential validity for effective selection criteria for professional programs, the immediate issue that arises is that of how the institution might establish a selection process involving these areas. Questions that must be considered include these: Are the available measures of personality variables sufficiently reliable and valid to withstand the intensity of likely challenges? Is it "fair" to have higher grade standards or skills expectations for one field than another? As Haberman (1972) observed, it is curious that a profession which regards itself as a social science places so little emphasis upon the use of the wide variety of instruments which measure flexibility, attitude toward children, professional interests, and other characteristics related to teaching variables that could be included in current selective admissions programs. About a decade ago, Beecher (1967) reported the availability of no fewer than 182 measures of teacher characteristics that had been used--some successfully, some less so--in studies of teacher effectiveness. The Beecher list was not exhaustive at the time of publication, and certainly a complete listing now would be even larger. And yet, Haberman's report found only one standardized measure used in as many as five different institutions. That single instrument, the Minnesota

Teacher Attitude Inventory, was characterized by Haberman as "simply a superficial attitude survey which can be correlated with anything but predictive of nothing" (1972, p. 15).

In their design of selective admissions programs, institutions might adopt on a trial basis batteries of tests which seem best to fit program goals and philosophy. The use of such instruments as tentative selection devices must then be validated empirically against teaching performance prior to their use as absolute screens. The reliability and validity criteria for empirical justification are, obviously, student teaching and the follow-up of graduates in regular teaching assignments.

Experience with Children as a Criterion

Surveys indicate that as many as half of the teacher preparation institutions require early experiences with children or adolescents as a condition for admission to the professional program (Haberman, 1972).

This practice is supported by the evidence that correlates teacher characteristics and teaching effectiveness. Applicants for professional teacher preparation programs should be able to present, at the time of application for admission, evidence of having availed themselves of opportunities to be associated with children or adolescents in a variety of settings.

Several issues regarding the pre-admission experience with children demand consideration by teacher preparation institutions:

Quality vs. Quantity. The question of quality and quantity control of the experience has never been adequately faced. Beyond the simple matter of confirming that some amount of some kind of exposure has occurred, the questions of how much, in what settings, and with what type of professional supervision present problems of verification and checking. Simple exposure to children without some direction to the activity involved seems inadequate. Development of criteria and descriptions of what constitutes meaningful experiences need to occur for the benefit of the potential applicant and of the teacher preparation institution so that the basis for judgment of adequacy is available to both.

Self-Selection vs. Community Input. The present use of the pre-admission experience seems to be almost entirely a self-selection measure. Through this process, the student is forced to confront at some level the notion of whether or not working with children is a personally rewarding experience. The potential of this tool as a selective measure would seem to be much greater than is suggested by the present informality of application. Increasingly, teacher preparation institutions should be reaching out to the schools, to community agencies, and elsewhere, and gathering in a systematic way of evaluation by other professionals of the level and effectiveness of the student's functioning.

Diversity vs. Concentration. Provision for breadth of experience with children at several age levels, with a variety of socioeconomic and ethnic backgrounds, in a number of different settings, would seem to provide educational advantage to the person seeking to enter teaching at any level in any subject matter. At the point of admission to the professional

program, quality control should require a demonstration of diversity of experience rather than a concentration upon one level or within one type of educational experience.

Observation vs. Self-Reports. At least a minimal amount of the experience that applicants for teacher preparation programs present as evidence for admission should be performed under observation of professional educators, either from the college or from the community. Logically, these observers should participate in the admission decision. Although difficult logistically, such a procedure would provide a reliability and consistency in decision making which would otherwise be lacking. A modicum of the experience base upon which applicants argue their case could easily be performed during their early years of residence within the institution and within the immediate environs of the campus community. While administrators and faculty must be willing to adjust academic loads to allow time for professionals to observe these activities, such adjustments are needed to lend meaning to student experience with children as a criterion for admission.

Differences Among Teaching Fields as a Criterion

Rationale. In addition to the limited amount of research data strengthening the argument that differences exist among teachers who are successful in various teaching fields and at various instructional levels, the exercise of logical extension supports such a position. Is it in any way reasonable to assume that the characteristics, ambitions, attitudes, and abilities of the kindergarten teacher are the same as those of the teacher of industrial arts? Would anyone seriously suggest that the teacher who may be successful in working with a class of 30 middle-class third graders would meet the same success in dealing with a class of street-wise inner city adolescents? Should we expect that the motivation of the teacher preparation student whose ambition is to teach honors science at the high school level is the same as that of the applicant who aspires to return home to a rural setting in order to teach the mentally or physically handicapped? Logic and empirical evidence indicate that the admission practices followed in institutions preparing teachers must reflect differences relating to age levels and subject areas to be taught by the candidate.

Process. A significant technical problem that the individualization of admission practice by field presents to institutions is the small number within test samples when students are divided by field or level. Nevertheless, as the institution develops more adequate screening processes, these differences in characteristics must be taken into account. One possible solution for the institution is to reduce, with the advice of its professional constituency and consumers, the breadth and number of fields in which it aspires to produce teachers. No longer can every institution prepare teachers for a complete range of subject matter, school level, and school type assignments. An adequate program of screening which reflects differentiation in expectation for exit performance should logically provide for related differences in entrance requirements.

Measures of Academic Ability as Criteria

Students applying to the professional program will usually have completed about half of the typical 120 semester hour requirement for the bachelor's degree. A large portion of this work will be in their teaching fields. Students who entered college with learning difficulties will presumably have had two years to avail themselves of remedial opportunities. Thus the student's probable continuing level of performance should be not only self-apparent, but also predictable by the institution and by those who must make decisions regarding admission to the professional program.

Existing Information. From existing data on past students and graduates, it should be possible for any institution to generate actuarial statements relative to the final standings in professional studies, academic studies, and the probabilities of graduation, grade-point standing, performance in student teaching, and the like. All of these can be generated through the use of multiple regression techniques.

Most institutions lack in their data one ingredient that is necessary to produce predictive equations based partially upon academic history: an adequate follow-up of graduate performance. A report by Sandefur and Adams (1976) provides a model for the implementation of such a procedure by any institution. The Sandefur and Adams report includes not only methodology and instrumentation for such a program, but time and resource recommendations as well.

Unfortunately the present state of the art does not suggest a minimal academic performance level which might be used for any field of teaching. Indeed, given the differences among academic fields and the differences among institutions in grading practices, curricular patterns, and the like, the establishment of a minimal entry level probably remains a matter for local determination. A recommendation that academic standards should not be treated as a single variable, but should be considered simultaneously with other criteria, follows logically from the issues already discussed. Needed at the program level, however, is an operational method for developing a statistical academic history of students in that program and an adequate assessment of their subsequent performance in the classroom. Only in this way can probability statements, as a basis for admission or nonadmission using the criterion of academic performance cutoff points, be applied meaningfully and equitably.

Nonstandard Verbal Behavior. Even with a well-supported program for selection on the basis of academic achievement, the teacher preparation institution is left with the difficult problem of nonstandard verbal behavior. Foster (1974) makes a strong case for the increased effectiveness of the teacher who works with minority students when that teacher can relate to the vernacular and folkways of the subculture. He points out that youth of minority subcultures view many normal middle-class male behaviors as effeminate and inappropriate models of behavior. On the other hand, he indicates the necessity within the minority school subculture for strong and appropriate models of the predominant culture. The compromise that seems feasible is a flexible teacher who can emphasize with, and make mature judgments regarding, the appropriate time for adjusting behavior to the teaching situation. It is perhaps in this area

that teacher education institutions are most vulnerable and in need of help and guidance. The practicing profession, the community, and students could assist teacher preparation by defining minimal levels of performance and acceptable degrees of variability in teacher behaviors, both verbal and nonverbal.

Influences on Quality Controls

Professional Expectations. At the time of application to a professional teacher program, students have had contact with three professional groups associated with the preparing institution: liberal arts professors, a smaller number of education professors, and professional persons with whom the student has worked in field experiences. In most cases, representatives of these three groups never have face-to-face contact. Is it possible that the high rate of admission--over 90 percent--results from a combination of inadequate sharing of critical information, unfamiliarity with what goes on in other departments, apathy toward students outside a specialized field, and unwillingness to risk confrontation over admission policies? One group is primarily responsible for the quality and training of teacher education candidates. Have teacher educators communicated adequately what is expected of each phase of the preparation program? If program objectives are ambiguous or unknown by some, it is unlikely that rigorous quality control can operate.

Another issue relates to whether teacher educators have emphasized narrow pedagogical skills at the expense of flexibility, creativity, and self-awareness. Are teacher educators willing to face such issues? Can they reach some consensus within and among institutions? While admissions criteria and programs are not presently well organized or well defined, opportunities for improvement are available for use even if on a tentative rather than a permanent basis. Such an approach is much preferable to endless delays while the ultimate program is being sought.

Community Involvement. The question of community participation in program design immediately raises the problem of defining "community." Graduates of institutional programs of preparation go to a wide variety of community settings. Are some teacher education institutions at a point when certification, and therefore preparation, should be community-specific? Should a particular institution decide that its target community for teacher graduates or for teacher candidates is, for example, the inner city, multilingual school, and that only students interested in, or from, this community need apply? Can community representatives become arbiters of difficult questions arising from such issues? For example, is the community prepared to evaluate the difference between desirable and excessive use of dialects? Is it prepared to become involved in school curriculum design, staffing, and scheduling? These and other questions have a direct influence on the selection and training of desirable teacher candidates.

Supply, Demand, and Available Resources. The declining demand for teachers in most teaching fields has been accompanied during the past six years by declining enrollments of students in teacher preparation programs.

Partially because of the lag time between enrollment shifts and reassignment of resources, many teacher preparation programs have more flexibility in faculty time than might have been anticipated. In the years immediately ahead, should this faculty time resource be diverted to recruitment of teacher candidates with the most desirable set of characteristics for a particular institution (for example, bilingual, minority, high intellectual capacity)? As the job market has operated to reduce numbers of students, has teacher education tended to lose many of the best and brightest? In addition to improving the scope of admission criteria, should institutions also increase the minimum levels of acceptable quality? What is institutional responsibility for reducing output to a level which matches realistic opportunities for employment?

Legal Challenges. As a matter of tradition, the relationship between student success and achievement (as measured by grades) is sufficiently well established to meet most legal challenges. It is possible that apprenticeship relationships involved in student teaching are also, through tradition, sufficiently established to survive legal challenges. Attempts to broaden the criteria into areas of personality, character, and characteristics uniquely associated with social, ethnic, and area-related differences, however, create problems that will doubtless demand legal clarification. Can educators define with sufficient precision, for example, the characteristic or construct of "interest?" Having defined it, can they measure it reliably? Can a valid relationship between interest and teaching performance be demonstrated? Unless questions of definition, measurement, and relationship to teaching performance can be answered with clarity, challenges to admission procedures are likely to involve innovative institutions in extended legal controversy.

If the faculty responsible for the student's professional training are required to make the final decision regarding that student's admission to the professional program, a number of issues must be considered. For example, what part of the faculty will be involved? Ought professors from the student's academic discipline be included in the process, since at this point they have had more contact with the student than have the professional education faculty? In some institutions, a recommendation from the chairperson of the student's academic department is required. Is one administrator able to represent the total department's opinion? How would collective judgment be obtained? Is any information sought or provided beyond course performance? As an area of human achievement, is excitement with learning in the field worthy of consideration? Have the academic departments already syphoned off the most promising teachers because they also appear to be the most promising graduate students in the various disciplines?

Community-Based Educators. Professional educators who are practicing in the schools or other learning settings outside the college will by this point in the undergraduate preparation have had opportunities to observe the affective characteristics of students, their interpersonal skills, and their reactions to pupils. Are the competency-based formal evaluation instruments that many schools have adopted for student teacher evaluation appropriate for admission purposes? Can we communicate to classroom teachers and others that the teacher preparation institution recognizes

that students will have limited teaching skills? Of more importance for admission purposes are the critical personality traits--emotional stability, interest in learning, flexibility, openness to children--which may be most reliably observed in classroom interactions. Can classroom teachers be convinced both of the need to be candid, and of the value of their assessment to the college? Should special training and rewards be provided to a rotating group of specially selected teachers who will perform this function?

Process of Interaction. Haberman's optimism (1974, pp. 234-35) regarding the interest of educators in "assiduously working toward" the objective of "selecting the very best people into teacher education" led him to formulate eleven guiding principles that should undergird the process of selection. Although items three through eight deal specifically with the participants in the interactive process, all the guidelines reinforce and emphasize the need for such processes:

1. Admission to professional education is a professional decision, not a student right.

2. Selection criteria should derive from program goals.

3. External selection must complement self-selection.

4. Professional experts involved in selection should include more than college faculty.

5. College screening devices must be replaced by professional selection criteria.

6. Selection is a process, not an event.

7. Admission quotas are a function of faculty and clinical resources.

8. Selection must assess the potential of candidates to function as continuous learners.

9. Selection must include procedures for screening adults as well as college youth.

10. More rigid adherence to existing criteria will not improve selection.

11. All program changes made in the future should take account of their impact on selection.

Whatever the sources of data used in decision making, the most critical question is how an institution will deal with those data. Will "rigid adherence" to old methods give way to more promising interactive processes? Will, at some time in the future, data be reducible to a regression equation with appropriate dependent variables so that decision making is a mathematical rather than a human process? This possibility seems

unlikely, at least in the foreseeable future. Hence, interactions are critical, and the major admission issues revolve around a three-part process: the selection of a responsible group of decision makers from within and outside teacher preparation institutions; the collection and integration of information in the form of multiples of complex variables about each student; and the bringing together of decision makers and information to produce reliable, valid, and professional judgments.

C. STUDENT TEACHING AND OTHER PROFESSIONAL FIELD EXPERIENCES

The employment of measures to facilitate and support the improvement of student teaching and other field experiences is both necessary and desirable, given the present set of conditions affecting public education. A strong field experience program culminating in student teaching that emphasizes quality can have significant impact on upgrading the performance levels of new teachers. The major issue confronted by teacher education institutions at this important quality control point is one of developing both innovative field experience programs and the means by which students can be screened for admission to them and evaluated following their completion.

The Changing Focus of Field Experiences

Traditional View. In previous years student teaching was the primary method used to introduce prospective teacher education candidates to practical experiences in elementary and secondary schools. In many instances student teaching provided teacher candidates with their first formal opportunity to become exposed professionally to the school, children, and general school procedures. Because it was often both the first and last significant contact with the reality of the school and classroom, it seldom functioned effectively as a basis for modifying preparatory experiences or serving as a screening device for teacher candidates.

Current View. More recently, early field experiences have become important elements of many teacher education programs. Through a well planned sequence of activities, students can obtain experiences which will enhance their eventual performance as classroom teachers (Pearl et al., 1969, pp. 1-10). Additionally, field experiences can serve to strengthen quality control by providing university personnel with a prolonged period during which to assess the student's suitability for the teaching profession as well as affording the student an opportunity for self-assessment. Perhaps most important, however, is the opportunity they may provide to link practice and theory, a blending essential to the professional teacher (Howsam et al., 1976, pp. 93-94).

Necessity for Institutional Change. Initiation of a teacher education program which emphasizes field-based experiences may require institutions to modify traditional practices if external learning experiences are to be meaningful and coordinated with academic programs. For example, it may be necessary to assign college personnel to field-based programs for extended periods of time or to employ school personnel as adjunct

faculty. Educators often describe the need for students to become familiar with and involved in community and local school activities. Even though teacher preparation institutions recognize the merits of this prescription for students, faculty exposure to local communities often remains limited and academic.

The Importance of Sequencing

Although recognizing the value of early involvement of teacher education students in field-oriented programs, both university and school personnel should avoid attributing automatic virtues to field experience. Poorly designed, unsequenced, and inadequately supervised field experiences waste the time of students and staff alike. Rather than fostering students' capacities to understand educational principles by observing or applying them in a reality context, ill-conceived field experiences may inhibit learning in children, discourage prospective teachers, and strain school-college relations. Therefore, it is imperative that mechanisms be established which ascertain the student's capacity to perform adequately at each level within a well-planned program of sequential field experiences. University personnel must identify criteria that students will possess as necessary prerequisites to support movement through the teacher education/field experience sequence.

Are field experiences presently organized in a sequential task-related manner that permeates the entire teacher education program (E. B. Smith, 1970, p. 15)? Or do field experiences operate more on an ad hoc, fragmented basis, with each professor "doing his own thing"? If field experiences are to become a viable and ongoing part of the teacher preparation program, effort should be directed toward adding structure to current activities, including specifying characteristics, skills, and qualities appropriate at each stage (Smith and Sagan, 1975).

Student Teaching and Effective Teacher Performance

Although there has been an increased usage of early field experiences, student teaching continues as the major aspect of teacher education programs. At this point students are expected to apply a broad range of theoretical understandings and practical skills in a total classroom environment. What has been a simplified and controlled context in earlier preparation stages now expands to encompass nearly the full complexity of the regular teacher's responsibility. Thus, student teaching serves as another checkpoint, a final test, and a necessary prerequisite for admission to the teaching profession. Successful completion of this experience, followed by graduation, normally leads to certification and subsequent employment. Therefore, student teaching has been generally viewed as the culmination of a student's preservice preparation program. But it should be understood as providing evidence of a "safe" level of beginning teacher skills and potential for continuing professional development rather than representing finished competence (Howsam et al., p. 81).

Characteristics of the Student Teacher. Although there is unanimity among educators regarding the importance of student teaching, there has been no widespread concurrence on the qualities, competencies, and

characteristics that effective student teachers should possess. Numerous research reports, studies, and articles attempt to clarify elements associated with good teaching, and much of a descriptive nature has been written about student teaching. What are the qualities, skills, and characteristics that students should possess as entry and exit points in the student teaching program?

Descriptive data outlining characteristics of "good" teachers have been reported which seemingly meet with general approval by educators. Ryans' well-known study (1960, p. 366) identified a series of characteristics associated with positive teaching models. These included "superior intellectual abilities, above average school achievement, good emotional adjustment, attitudes favorable to pupils, enjoyment of pupil relationships, generosity in the appraisal of the behavior and motives of other persons, . . . interest in music and painting, participation in social and community affairs, early experiences in caring for children, and teaching . . . strong social service interest. . . ."

Admission to Student Teaching. Admission to student teaching programs has usually focused on such elements as grade-point average (overall, in teaching major, and in the professional sequence), recommendations of instructors, and evidence of speech proficiency and good health. These and similar standards, though important, appear inadequate in view of the awesome responsibilities with which teachers are charged. General dissatisfaction has been registered with present standards, indicating a need to upgrade requirements which would ultimately improve the teaching profession.

Could data such as Ryans' characteristics be modified and applied as entry criteria in student teaching programs? Are those qualities the traits that individuals interested in pursuing teaching as a career should possess or seek to develop as teacher education students? If so, the task of converting these qualities and characteristics into workable criteria to govern entry and continuing education points in the student teaching program becomes a primary responsibility of education institutions. Coupled with an emphasis on development of these broad characteristics, which should ideally permeate the total college experience of the prospective teacher, must come development of appropriate beginning levels of skill in the essential classroom management and instructional operations. An important issue to consider is whether such characteristics are in fact generic to effective teaching in all communities and subject fields and at all grade levels, or whether some are more essential for success in particular teaching assignments. Should some institutions be encouraged to focus on seeking or developing certain clusters of characteristics as most relevant to the jobs their students will obtain, or are such characteristics fundamental to the effectiveness of all teachers?

Mastery Learning Concept. Carroll (1971) and Bloom (1971) suggest that mastery can occur if the learner perseveres and if sufficient time, determined by individual rates of learning, is allocated to the learner to master the task. Application of the mastery learning concept to student teaching implies a deviation from a fixed time sequence for completion of this important activity. The time period allocated to student teaching might be for a portion of a semester or could extend beyond an academic

year. This approach, though more difficult to administer, represents one way of establishing common criteria for successful student teaching in a particular subject area or level while permitting a response to individual differences and needs.

Final Evaluation. The ultimate responsibility for evaluation of student teachers usually rests with the university supervisor. Generally the evaluation process includes consultation with the cooperating teacher in the field assignment and agreement on the degree of proficiency exhibited by the student. The cooperating teacher has responsibility for day-to-day supervision and evaluation of student teachers in the classroom, since institutional supervisors often make only infrequent visits to monitor classroom performance. Given the important role of the cooperating teacher in the daily supervision of student teachers, should increased responsibility for the final evaluation rest at that level? Is it realistic to expect that an infrequent visitor from the institution can assess adequately and fairly the performance of a student teacher? On the other hand, can local schools assume responsibility for the evaluation of student teachers? This concept of localized evaluation procedures, although not strongly supported by teacher training institutions, has been discussed as a workable and practical solution to the problems associated with the evaluation of student teachers (Andrews, 1964, pp. 55-56).

Selection and Training of Supervisory Personnel. If school-based personnel are to have an expanded role in assessing student teacher competence and potential, are there adequate means for selecting and preparing them for such responsibilities? Major aspects of training would likely include techniques of supervision, interpersonal communications, and evaluation as well as familiarity with the objectives of the college program (Leslie, 1971, pp. 303-309).

A Proper "Fit" of Student and Teacher. To further support the student in the field, care must be taken in the assignment of student teachers to classroom teacher supervisors. There should be an established procedure to permit matching a student's interests, skills, and personality to appropriate characteristics of the teacher supervisor. This does not imply corresponding qualities, but rather ones which evoke the most beneficial learning environment for the student teacher.

Involvement of Professional Organizations. Professional organizations generally play a significant role in influencing quality control measures to guide the preparation of individuals for a specific profession by imposing rigorous selection and performance criteria on candidates. Individuals who fail to meet prescribed performance levels and other indicators designed to measure their competence are generally refused admittance. Individuals seeking membership in the medical and law professions, for example, are required to demonstrate and maintain a high level of professional competence. In contrast, no universally accepted method is employed in teacher education which provides for the profession's endorsement of the qualifications of those concluding preparation programs. While numerous professional organizations have endorsed and recommended certain standards, the teaching profession has been slow to assume

responsibility either for admission to its ranks or for dismissal from them. As citizens continue to register dissatisfaction with public education, and as the surplus of teachers continues, teacher organizations may well be pressed to develop meaningful quality controls.

Implementation of Quality Control Mechanisms

Reality Criterion. Is this the appropriate time to implement rigorous quality control measures aimed at improving the teaching profession? Some could argue that the most feasible time to improve the quality of teacher education programs has long since passed, that the most appropriate time perhaps was some twenty years ago when teacher demand far exceeded the supply. Teacher education programs that mushroomed during the 1950s and early 1960s, stimulated by the critical shortage of teachers, are presently confronted by a dilemma. While they support the idea of improved quality controls made possible by a reduced demand for new teachers, the substantial reduction of numbers is likely to reduce sharply the personnel and funds available for teacher education because of higher education's use of student credit hours as the principal basis for source allocations. Will teacher education institutions establish rigorous quality control measures, given already declining enrollments and resource allocation policies? Would the implementation of such measures threaten the existence of large numbers of teacher education programs? Haberman (1974, pp. 234-35) contends that teacher surplus or scarcity ought not influence considerations of quality in teacher preparation.

Legal Issues. As institutions employ quality control measures in student teaching programs, attention must be directed to possible legal challenges initiated by individuals who are excluded from practice teaching. Can students legally be excluded from student teaching programs for failure to meet a set of qualifications established by school officials? Must relevance of such criteria to teaching performance be documented? Who will have final authority in the decision-making process? Prior to the initiation of measures which can serve to exclude students from student teaching or other institutional programs, the legality of such exclusions should be firmly established. In an attempt to protect student rights, institutions should be especially cognizant of the legal implications that may exist as quality control measures are applied to student teaching programs.

D. COMPLETION OF PRESERVICE PREPARATION AND INSTITUTIONAL RECOMMENDATION OF CANDIDATES FOR INITIAL CERTIFICATION

Responsibility for Product Characteristics

Unlike selection of students seeking entry to professional teacher preparation programs (where the selecting/training institution normally has had little contact with applicants and deals with limited data concerning students' previous attainment), the teacher preparation institution must accept a very large portion of the responsibility for product characteristics upon releasing teachers as certified and employable. By the

time the undergraduate student reaches the point of institutional recommendation, the institution and student have interacted for two or more years. During that time span, at least three crucial processes should occur: (a) faculty and other decision makers become thoroughly familiar with the innate characteristics, attitudes, and abilities of the student; (b) through the training program and sequences offered, the faculty has had an opportunity to shape and modify presage variables and to develop process skills and abilities of the student; and (c) the preparing institution and its staff have had much time and many opportunities to observe, measure, and judge whether or not the potential teacher has developed those characteristics and skills which are essential to the performance of the classroom teacher. It is possible that 25 semester hours of professional instruction is too short a time for the adequate preparation of a teacher; nevertheless, the recommending institution is to a large degree prevented by tradition as well as certification regulations from using this argument regarding the products of its training. If the professional faculty judge that the institution is incapable of making adequate certification decisions, then drastic reorganization of program and decision-making processes seems in order.

Defining Program Purposes

Perhaps the greatest long-term criticism of professional preparation training has been that the program intent, in definable student outcomes, has never been clarified. Contributing to this confusion of purpose is the pessimistic view of many behavioral scientists regarding the possibility of developing a compendium of positive knowledge based on research that relates to teaching effectiveness (Brim, 1958; Berliner, 1976; Cruickshank, 1976). During the past decade, however, a few researchers have begun to make headway in areas that seem to offer hope of overcoming part of this problem (Gage, 1976; Kennedy and Bush, 1976).

Competency Based Teacher Education. Before any teacher education institution can begin to make more effective decisions regarding recommendation for certification, the purposes of the training program, as reflected in the end product, must be carefully specified. This reality, more than any other, has given rise to the Competency Based Teacher Education (CBTE) movement. Whether or not an institution chooses to embrace CBTE as the whole program for its teacher preparation efforts, the essential elements of CBTE seem to be a minimal requirement for goal setting. Logic supports the contention that only after goals have been set for the student's professional program can adequate evaluative criteria--based upon the degree of goal achievement--be determined. Elam (1971, pp. 6-7) lists five necessary elements in establishing goals and determining assessment procedures: (a) Competencies to be demonstrated by the student should be derived from teacher roles, stated so as to make evaluation possible, and made public. (b) Criteria utilized to evaluate these competencies must be explicit in outlining areas of mastery, and must be known by student and evaluator alike. (c) Assessment of the competencies should be objective and based upon student performance. (d) Demonstrated competency, rather than time or course completion, determines

the student's rate of progress. (e) Finally, the purpose of the instructional program is to facilitate development and evaluation of the student's achievement of the specified competencies.

Critics of CBTE point out that such programs produce teachers who are better didactic technicians than are the current graduates of teacher education institutions, but that these new graduates lack the necessary underpinnings of foundational and theoretical viewpoints that distinguish the technician from the professional (Broudy, 1972, pp. 5-11). Many professional teacher educators do not believe that the goals of technical proficiency and theoretical knowledge are mutually exclusive. What factors prevent teacher preparation programs from incorporating the teaching skills implied by a competency based approach along with the theoretical considerations necessary for the professional?

Generic vs. Specific Goals. As a beginning step in the establishment of more effective bases for decisions, it would seem logical for any teacher education institution to follow an orderly sequence of steps, such as that recommended by Elam, in order to determine goals for the professional program. Efforts of some institutions to establish criteria seem to be haphazard in nature. As a result, there exist compendia of competencies for programs and for courses that are far beyond the instructional or assessment times available. An institution might be able to deal more effectively with the identification of program goals by separating the generic goals, which are applicable to all teaching areas and fields, from the goals specific to a given level, field of study, or target population. In such a system of generic and specific goals, every student would learn the major theories of child development, cognitive learning, and personality growth as they apply to each age level; develop the capacity to recognize the characteristics of exceptionality among students; and learn how to design a program of instruction appropriate to children of specific socioeconomic backgrounds based directly upon major theories of cognitive and affective development.

Selection of Model. To accomplish the task of promoting both generic and specific learning, the institution and its faculty must come to a consensual decision regarding the model or models of teaching to which they intend to subscribe and toward which they hope to foster development. Joyce and Weil (1972) suggest and describe 16 distinct teaching models which an institution might embrace in total or in part. Choosing a different approach, the institution might prefer to develop and experiment with parallel programs based on different models in specific areas.

Following the generic/specific schema, the choice among models might focus on subject-matter or grade-level specifics; the selection would generate significant differences in terminal goals for teachers in training. Certainly the relative emphasis on the methodology implied by the choice of teaching models will vary greatly from subject area to subject area, age level to age level, ethnic group to ethnic group, and so on. The major point is that until institutions and faculty come to grips with decisions as to what characteristics the final product should possess, evaluative decisions in individual cases will be haphazard and unreliable.

Achieving Program Goals

Strategies. When an institution has selected the characteristics that the product of training should exhibit, decisions about the vehicle for development of those characteristics can be made. Until fairly recent years, two staples in the repertoire of teaching--class lecture and practical experience--provided the only options. More recently a plethora of alternate strategies--protocol materials, simulation, microteaching, auto-tutorial methodology, targeted field experience, and many others--have become available.

This increase in options has enhanced the prospect of developing effective professionals. At the same time, it has complicated the task of matching teaching objective to teaching methodology. Taba (1967) has perhaps provided more helpful guidelines than any single source concerning the process of matching objective to teaching strategy. The institution itself is also in a position to provide multiple options and learning strategies to students taking professional courses. Four generalizations have been identified (Peck and Tucker, 1973, pp. 940-71) around which professional preparation activities might be designed. These are: (a) enhancement of effectiveness through utilization of a systems approach, (b) modeling by teacher educators of those characteristics considered desirable in teachers, (c) approximation of real life situations in training methodologies, and (d) capitalizing on the desirable learning effects of traditional methods of professional instruction as well as utilizing alternative strategies.

Interdisciplinary Program Development. Is it possible for faculty members, in attempting a systematic program design, to be sufficiently self-critical to avoid stating objectives in such narrow terms as to represent only the mechanics of teaching behaviors? Conversely, can they avoid dealing in terms so broad that their translation into appropriate activities is impossible?

As noted earlier, any teacher preparation program must clearly specify the goals toward which it strives. Those goals can be met through the inclusion of all three components of the undergraduate program--liberal education, preparation in major, and professional offerings. In the planning of any professional program, the frequency and type of interaction between the liberal studies faculty and the professional studies staff will affect the comprehensiveness and effectiveness of program design and implementation.

The general trend in program design seems to be that each field is left to its own devices. Mathematics specialists design math curricula, English teachers design English curricula, reading specialists design programs to train reading teachers, and so forth. That pattern seems to be a logical one and has been utilized in the various intensive attempts to improve performance in science, math, and foreign language in the post-Sputnik era and to facilitate reading achievement during the past ten years. Few of these efforts, however, have produced results that are durable, exciting to learners, or significant to educators. Perhaps the greatest need in program improvement is to open up the planning and development process. Have educators isolated themselves from each other to the extent that meaningful criticism and flow of ideas across fields

occur only by chance? Do teachers of teachers tend to embrace a learning theorist's position to the exclusion of all others? Could cross-disciplinary flow free teacher educators to some extent from narrow views of teaching and curriculum?

Evaluation. Under the aegis of the American Association of Colleges for Teacher Education (AACTE), Sandefur (1970) proposed a model for the evaluation of teacher education graduates. That model includes four major categories of data sources: career line information; direct classroom observation; pupil, peer, and supervisory evaluation; and standardized measures. Three of those four measures are available for consideration as the student progresses through the training sequence.

As teacher preparation programs move toward more and earlier field experiences, direct observation at any stage of student preparation becomes possible. Further, with performance expectations in the program clarified for the benefit of student, professor, and professional classroom teacher alike, observation of students can focus on stated objectives for performance and application. Thus, reports on observations during the training program can serve both as a source for prescriptive training and, at the point of decision regarding recommendation, as a factor in the decision-making process.

Sandefur's "direct observation" recommendation is tied exclusively to student-teacher interaction modes (for example, Flanders, 1960; Amidon and Hunter, 1966; and Hough, 1967). Observation of teachers in preparation or at the conclusion of preparation need not be so narrowly restricted. Rather, a broad range of teacher behaviors can and should be evaluated by direct observation before the institution applies its stamp of approval through certification.

Pupil, peer, and supervisory ratings can provide information regarding affective behaviors of teachers for which systems of observation for specific teaching acts are inadequate. Research provides considerable support for the validity and reliability of such evaluations in identifying teacher behaviors, attitudes, and characteristics, and some support for relating them to teaching effectiveness. Teacher preparation institutions should make use of such input in evaluating the future teacher. One special advantage in doing so is the broadening of the data base upon which critical recommendations are founded by including a larger number of individual judgments made by professional and lay personnel.

A wide variety of standardized measures are appropriately utilized in arriving at a decision regarding recommendation. These measures could include not only measures of characteristics associated with good teaching performance--flexibility, adaptability, openness--but also measures of competence in the subject area to be taught (for example, the Modern Foreign Language Association tests of technical competence). Teacher education institutions have been hesitant to apply either type of test after the student has successfully completed required coursework, an understandable position when expectations and requirements for certification are stated only in terms of course completion.

Influences on Program Goals

Accreditation Agencies. Accrediting agencies and state departments of education have a maximal impact upon quality control of certification. Through institutional accreditation, planned program approval, and establishment of minimal curricular and academic criteria, state departments have created a set of regulations which must be adhered to by every institution in that state. More recently, some state departments have become active as advocates of special approaches to education, such as mandatory competency based teacher education. Institutions of higher education have tended to use state certification requirements as an excuse for their reluctance to change programs, curricula, and existing requirements. As a result, little is understood about the interactions and reactions that result in the pervasive influence of state requirements. Their flexibility, their alleged restrictiveness, and especially what many perceive as their increased aggressiveness have yet to be tested or challenged by teacher training institutions.

Accreditation bodies, whether regional or national, may exert both positive and negative effects on quality control. Would most institutions find the time for self-review and assessment if not forced to do so by accreditation visits? Had the 1961 National Council for the Accreditation of Teacher Education (NCATE) Standards not called for the formal admission of students to professional programs, for example, would that particular problem have received institutional attention and action?

Professional Groups. Content in academic majors can be influenced to a considerable degree by recommendations of learned societies. Such groups are frequently dominated by academicians in the field. One may question the breadth of input from these scholars trained in particular disciplines, who, through their professional organizations, seek to influence policies relating to broad education goals in teacher training. Furthermore, with what frequency do learned societies review their recommendations from the viewpoint of modernization of ideas as well as for the currency of the rationale behind their suggestions? It is possible that both the teaching profession and NCATE should scrutinize the depth and direction of this influence on quality control in teacher preparation.

Community. If an institution responds strongly to demands for community-specific teacher preparation programs, community perceptions of teachers and schools must strongly influence certification criteria and teaching standards. Many concerns arise immediately. What is, or should be, the role of the community in decision making? Community leadership may well lack skills in shared decision making, having acquired position and power through sophisticated utilization of adversary relationships. How far is the teacher education institution ready to go, once it has made a commitment to community participation in certification decisions? How many decisions, and in what areas, will it share? What weight will each participant in this sharing have in the decision-making and implementation process?

Legal Challenges. Writings on teacher education repeatedly stress that course grades and grade-point averages are insufficient indicators

of student quality. Institutions everywhere from time to time discover that a student at the point of certification recommendation should not be allowed to work with children. One result of this fact is that legal challenges to certification regulations are increasing. Legal aspects have focused faculty and institutional attention on the course to follow when an applicant's unsuitability is recognized late in that applicant's academic career. How do teacher educators protect themselves against the constant legal challenge to their decision-making authority? One possibility is that of conferring a degree without certification for teaching; this process might be accompanied by career counseling services for the degreed but uncertified student.

It is to be expected that whatever means institutions now use to deal with eleventh-hour decisions to recommend against certification will be challenged in the courts. Some challenges will succeed, despite the institution's precautions in accumulating data to support its case. How much data must teacher education institutions accumulate in order to substantiate their criteria for certification recommendation? This question has not been answered satisfactorily as yet.

The issue of alternative solutions to the problem of candidates trained for but unsuited to teaching deserves critical thought and creative solutions. Perhaps one focus might help to clarify the issue so far as the teacher preparation institution is concerned: Is the institution's ultimate client the student who has spent about four years seeking accreditation? Or is it the pupils who will be taught by that student for the student's career life? If one balances an ineffective or unsuited teacher against the hundreds of children who will have dealings with that teacher, then the institution's responsibilities emerge clearly. It must devise processes to meet the legal challenges instituted by those students who have slipped past all quality control points to the point of certification, and against whom prospective pupils must be protected. At the same time, it must provide supportive services for those students by suggesting and facilitating the pursuit of alternative careers.

E. TEACHER CERTIFICATION BY STATE AGENCIES

The precedent is well established that individuals cannot be employed by local school systems as teachers or other instructional staff members without prior certification or licensing. Establishment of such policies by states and the courts' affirmation of them are presumably intended to protect the general welfare. Court decisions have upheld a state's prerogative to exercise its police power and limit the profession of teaching to those who meet prescribed criteria, a practice intended to protect state and local interests by guaranteeing the professional competence of those who teach children.

Early certification practices commonly employed standardized examinations or preparation requirements, with original responsibility for certification largely in the hands of county superintendents of schools. Certification is now conducted by the 50 state systems, with a small group of large city school districts retaining certain special authority. Common requirements shared by the states include citizenship, age, good health, and evidence of good moral character. All states minimally require a

bachelor's degree, with limited exceptions relating to teachers in certain vocational or industrially oriented fields. Some states also require specialized courses, such as those relating to state history, conservation, and consumer education.

Approved Program Approach

The most common practice associated with teacher certification has become the approved program approach, replacing the transcript analysis practice common several decades ago. It generally combines the following elements:

1. State department of education accreditation of institutions engaged in teacher preparation

2. Development of guidelines for teacher or educational specialist programs in the various fields of preparation by an agency of the state department of education, involving representation from colleges, school systems, and other school related organizations

3. Development of programs by higher education institutions for submittal to the state agency consistent with the guidelines

4. Examination by the state agency of institutional programs submitted and a decision regarding their approval or disapproval

5. If program approval is received, appropriate college personnel recommend students successfully completing such programs for a teaching license to the state department.

The present process of teacher certification, therefore, involves the state department of education's placing upon an administrative official in each institution responsibility for certifying that a student recommended for a certificate has successfully completed a program of studies which the state agency earlier judged to be appropriate for the development of professional competence. Can certifying the student's successful completion of a sequence of courses which are part of an "approved program" guarantee professional competence of a beginning teacher? If the teacher's role is ill defined or so varied from community to community that no common elements can be anticipated by preparing institutions, the effectiveness of the approved program is further jeopardized.

A number of issues with important implications for quality control in teacher education relate to certification standards and procedures.

Issues Relating to Role Definition

Relation to Performance. Can meaningful certification standards be established without prior attention to role definition and role expectations and the training program objectives expected to prepare personnel to fill those roles? Without such role definition, can certification standards be seen as anything more than incidentally related to teacher role

performance? Numerous legal challenges are being introduced, requiring evidence that certification requirements are functionally related to job performance rather than simply representing obstacles to employment.

Commonality of Role Expectations. If state certification requirements must demonstrate relevance to teacher roles and performance to be judged legitimate and secure from legal challenge, a related issue must be raised--that of the extent to which a teacher's role in a particular subject field or grade level is broadly comparable across the boundary lines of school districts employing such personnel.

Is there, for example, sufficient comparability of roles of elementary school teachers, high school science teachers, and middle school language arts teachers to establish common role definitions upon which state certification standards can be based? If the answer to this question is "yes", a logical follow-up is whether such common role expectations are of a broad generic nature or whether, in fact, they are parallel in terms of a high degree of specificity. Logically, the nature and form of certification standards should reflect the same level of generic or specific qualities as the role expectations shared by school systems affected by the standards.

Validity of Statewide Standards. Lack of commonality of role expectations, on the other hand, lays open to question the whole structure of state level certification. If a certification standard, based on a role definition, is consistent with the teacher's role in one school district but quite inconsistent with that in another, either the school system's determination of teacher roles or the validity of statewide certification standards must be reassessed.

The extent to which the maintaining of state agency authority for teacher certification is currently in question may be seen from a bill introduced in the last session of the Florida Legislature which proposed to abandon all statewide certification and transfer this authority to county or local school districts--a system reminiscent of practice at the turn of the century.

Local Criteria. The proponents of policies which would permit local school districts to employ teachers on the basis of locally established criteria claim such a plan would result in staff members who were responsive to learning needs of the children served by those schools. Support for this position has come, in some instances, from minority groups who have chafed under the insensitivity of teachers and administrators to the cultural backgrounds and learning needs of their children. Would decentralization of standards for certifying teachers result in improved educational opportunities for minority and other neglected children? Or would decentralization permit, perhaps encourage, the perpetuation of narrow, provincial, and bigoted community values through a biased community power structure?

Reciprocity Between States. A related issue concerns reciprocity between states for the issuance of teaching certificates. Do the differences between communities and students in two states permit the acceptance by one of teachers prepared in the other as possessing a safe level of

professional competence? Is there not as great a variation among individual and community educational needs within many of our states as among them? If a teacher's preparation from one state should be judged unacceptable to educational needs in another (assuming general comparability of requirements) on the basis of different student and community needs, is there any greater likelihood that uniform state certification standards will be equally relevant to the range of educational needs of urban and rural, agricultural and industrial, affluent and indigent, or majority and minority populations within a state? If there are not generic teaching competencies relevant across the boundary lines of states, school districts, and neighborhoods, will not teacher education inevitably either return to the pattern of the normal school or have its pedagogical components provided entirely by employing school systems?

Need for Multilevel Plans. These issues suggest the need for a different view of the several stages of teacher education--preservice, inservice, and continuing professional development--and a multilevel certification plan which reflects the importance of both generic and specific teaching knowledge and skills. Consideration of certification ideas consistent with those objectives follows.

Multilevel Certification

The importance of continuity in teacher education and the continuing nature of the teacher's professional development suggest the need for consideration of a certification plan that is consistent with such concepts. If the broad pattern of teacher education is to begin with a preservice preparation phase designed to develop certain generic teaching competencies at a level that permits a graduate to begin practice at an acceptable level of safety to the client, it is logical to expect that initial certification will concern itself with those generic qualities related to client protection at a beginning level.

Internship. Successful teachers must apply generic competencies appropriately to specific community, school, and individual needs. This process of application is expected to occur during the initial years of teaching, which is precisely when most collegiate training programs have concluded their relationship with the individual. Furthermore, many school systems are staffed inadequately to provide regular supervision, consultation, and support to the new teacher. As a consequence, some thoughtful teacher educators are proposing a five-year program of preparation, with the additional fifth year providing for a full-time teaching internship carried out under joint supervision of employing school district and training institution personnel. Under such a plan, a continuing certificate might be issued at the conclusion of that internship based on the evaluation by school system and university personnel, and focused on evidence that the candidate had applied generic teaching competencies appropriately to specific learning situations.

Often professionals in the field have little input about the appropriateness of certificate renewal for their colleagues. The critical questions to be asked before recertification relate to the ability of the individual under consideration to adapt and utilize professional

knowledge in specific situations, rather than imposition of criteria associated exclusively with additional academic study. Needed is a plan to seek evidence that the candidate could effectively apply generic learnings in specific situations and was committed to a systematic program of professional growth designed to enhance that application. Such a plan would permit initial teaching on the basis of success in the college based preparation program, but would expect that continuing certification would result from field based evidence in two areas: first, demonstrated competence in applying principles and concepts to particular classrooms and children; and second, evidence of a functionally designed program of inservice education aimed at facilitating that application and responding to instructional needs of the school system in which the candidate was employed.

Further Professional Growth. The teacher's professional obligations do not cease, however, with development of competencies applicable to a particular teaching-learning environment. The career teacher has an obligation to continue to expand professional competencies in the direction of developing diagnostic and analytic skills which permit adaptation of knowledge and teaching modes and materials to fit a broad range of learning needs. The preparation process begun as an undergraduate with experiences aimed at providing conceptual underpinnings for specific teaching practice is extended and enriched in continuing professional development throughout the career life of the teacher. Such experiences go well beyond situation-specific training which is the primary focus of inservice education and of the continuing certificate level of the certification process. The standards for certification of the beginning teacher rest upon evidence supporting a safe level of competence to begin practice. A continuing certificate should document the individual's ability to apply the knowledge and skills gained in a broadly based preparation program to a particular school environment.

The Teacher-Scholar. The measures associated with awarding a higher level of certification, what Andrews (1971, p. 14) refers to as a consultant certificate, should emphasize instructional management capabilities, including diagnosis of learning needs, curriculum planning and instructional materials development, and other competencies defined as marks of the career teacher-scholar.

A Four-Level Plan. Andrews' (pp. 14-17) proposal for multilevel certification suggests four professional levels reflected in the type of certificate. Initially, the teacher candidate receives a "preparatory" certificate, which authorizes preparatory experiences with children, youth, and adults in school or school-related settings. "Initial" certification follows, and may be valid from one to five years. It authorizes initial school service as a staff intern. The person begins to assume independent responsibility for clients. A "continuing" certificate authorizes school service on a continuing basis. The person has shown that he can effectively perform professional tasks. A "consultant" certificate is awarded to those who qualify for roles which contribute to professional preparation and to the improvement of instruction, and who hold

"continuing" certification. It is optional, limited to five years of service, and may be renewed.

The Andrews proposal closely parallels that recommended by the AACTE Commission on Education for the Profession of Teaching (Howsam et al., 1976, pp. 124-26), with the latter report placing more explicit emphasis upon the involvement of field based personnel in confirming the ability of the teacher to apply professional knowledge effectively to a real teaching-learning environment.

Objections to Multilevel Certification. Such a departure from present practice would, of course, provoke controversy and raise many issues. One would likely be that the process of certification is already too cumbersome, demanding, and highly structured. Any plan which extends the certification downward to include students in preparation and upward by eliminating lifetime certificates would be viewed with alarm by those who share Taylor's (1968, p. 201) belief that "what we need is not more rules and administration but more excitement." Those who argue that periodic license renewal discriminates unfairly against teachers would do well to note the current trend in other professions toward establishment of continuing education requirements for practitioners in order to retain a license to practice.

Another issue relates to the possible appropriateness of a "preparatory" certificate authorizing preparatory experiences with children, youth, and adults in school or school related settings which lead to initial certification. Many teacher preparation programs are providing extensive sequentially planned field experiences for prospective teachers, beginning with early professional courses. Some educators have expressed concern, however, that teacher education students without necessary background and insights may be involved in experiences having significant learning consequences for those with whom they have contact. The preparatory certificate would require the establishment of appropriate levels of learning and background study as guidelines for appropriate student experiences.

Competency Based Certification

Another highly controversial issue area relating to certification has been the mandating of competency based preparation programs through certification requirements. In several states (for example, Texas, New York, Florida) regulations were established requiring teacher preparation programs to be structured in a competency mode within a certain time period. In New York, teacher organizations voiced strong opposition, holding that there were no provisions for significant teacher involvement in the planning process. In Texas, an Attorney General's ruling held that a competency mode for preparation programs represented but one alternative, with institutions being permitted to develop and implement programs organized around other rationales as well. To many, including a number of individuals strongly supportive of competency based teacher education, the movement toward mandating competency based preparation programs through certification regulations represents a serious error.

Control of Certification Policies and Practices

An important issue relating to teacher certification is that of control of the certification process. Teacher organization interest in certification has grown rapidly in recent years. These organizations take the position that teachers should have a central role in determining and applying the certification standards for entering and continuing in the profession. As a consequence, the National Commission on Teacher Education and Professional Standards, an agency of the National Education Association (NEA), proposed the establishment of a professional practices and standards commission in each state, with broad ranging responsibilities to include institutional accreditation, certification standards, and professional ethics. Many teacher educators voiced considerable opposition to the model proposed by NEA because the Commission called for a majority of elementary and secondary school classroom teachers and provided for only two college based personnel out of the thirteen members recommended. California, Oregon, and Minnesota are among those states which have already moved to establish such commissions; many states have advisory councils to the state board of education that consider guidelines for certification and related matters.

Some believe that a serious conflict of interest is created by permitting professional groups to influence certification standards, a position in marked contrast to that which holds that teachers, like other professional groups, need to strengthen their influence on admission and retention in the profession if they are ever to realize full professional stature.

Use of Examining Universities or Licensing Institutes

A recurrent criticism of teacher certification has been that it reinforces the emphasis upon narrowly prescribed programs with heavy professional components and as a consequence rules out persons of unusual experience and competence whose background does not include the conventional professional sequence. The criticism makes more important the development of a functional relationship between preparation experiences and the competencies which teacher practitioners are expected to display. When such competencies are unclear, efforts to maintain a tight pattern of preparation are inevitably subject to serious challenge.

Licensing Institutions. One alternative that has been proposed by some of the critics of present certification practice has been the establishment of teacher examining or licensing institutions. Central to such a plan would be the establishment of a requirement that every individual seeking certification as a teacher be examined by an officially designated regional examining institution. Before a certificate was granted, the candidate would need to demonstrate proficiency by passing a written examination covering material established as important.

A related idea recommended in the report of the Study Commission on Undergraduate Education and the Education of Teachers (1976, p. 145) proposes establishment of an occupational licensing institute to undertake the necessary research to identify rational hiring criteria for teachers.

An obvious concern with the concept of the examining university is that such a plan would focus teacher certification on a narrow band of test-oriented knowledge rather than on relevant experience or demonstrated competence. Another concern centers around a belief that teacher preparation programs would become narrowly standardized instead of reflecting a broad range of community and population differences.

Experimental Efforts. Teacher preparation institutions often complain about the rigidity of state certification systems that inhibit their development of more functional programs. Most state certification programs, however, provide for approval of programs which depart substantially from established guidelines. If institutional requests are based on a desire to experiment and if an appropriate rationale for the deviation accompanies the request, state departments are likely to approve experimental efforts. Indications are that certification offices are not being overwhelmed by such requests.

Some Legal Challenges

Relevance to Job Performance. Criticisms of current certification standards take several forms. Some hold that the standards are not directed and simply block certain persons, including specific segments of the population, from employment. Some feel that certification standards represent restrictive licensing and protection for certain occupational groups rather than providing necessary consumer protection.

Such criticisms pose potential legal challenges at every level of the teacher education control process, and certification seems especially vulnerable.

Minority Rights. An awakened societal sensitivity to the rights of minorities is resulting in careful examination of admission, certification, employment, and promotion decisions, affecting workers in every field. A central issue for teacher certification focuses on how to protect minority rights at each level, while at the same time exercising rigorous selection and screening to ensure that classrooms will be staffed by highly competent professionals.

Title VII of the Civil Rights Act of 1964 responded to concern regarding employee selection procedures that seemed to discriminate against minority group applicants on the basis of non-job-related selection criteria. That Act and the guidelines of the Equal Employment Opportunity Commission (EEOC), the agency established in the Act to implement its policies, provide the basis for a series of significant legal challenges to certification standards and to preparation program components contained within them.

Other Legal Issues. Hopkins (1973, p. 3) posed six basic legal questions:

1. Through teacher certification does the State, or its delegate agencies, certify that a person is in fact qualified (a) by experience and/or (b) by academic preparation, to teach and/or administer effectively a publicly accredited school program in the State?

2. The State certifies to itself and/or to its local delegate agencies that a person is qualified, and subsequently this individual demonstrates on the job that he or she is not capable of effectively performing the teaching duties for which certification was granted; does the State or its appropriate delegate agencies become legally liable? (a) To taxpayers? (b) To parents and students?

3. Does a State certified teacher or administrator have a legal cause for action against the State or its delegate agencies, should performance on the job demonstrate lack of the real qualifications which the State previously certified the person to possess?

4. Does a taxpayer in the State have a legal cause of action against the State should unvalidated teacher certification standards be proved inadequate in terms of their relation to effective learning by students?

5. Are the State and its delegate agencies legally obligated to validate regularly their certification policies and procedures by proving them to be job related, through analysis and evaluation of certification standards in terms of their relation to effective learning by students?

6. Is the State obligated to demonstrate that its certification policies and procedures do not discriminate arbitrarily against members of racial minorities aspiring to be teachers and administrators in publicly accredited schools of the State?

In Conclusion

The same dilemma which confronts those concerned with quality control at every other level remains central to the certification process. What measures document that persons completing approved teacher education programs perform effectively in real school situations? What training components cause differences in teachers or teacher candidates which in turn cause them to enhance learning among those they teach? Perplexing though the problems may be, the efforts of all elements of the teaching profession must be addressed to their study and solution.

F. EMPLOYMENT

Employment of teacher personnel represents a shift in focus of the quality control process. Preservice programs, whether broadly generic in nature or addressed to the development of instructional skills linked to particular groups of learners, are designed to prepare individuals for teaching in many places rather than in a particular assignment. In contrast, employment decisions provide an opportunity to utilize selection criteria that relate to a single community, a certain school, and a particular assignment within that school. Questions of individual competence in a generalized sense remain important but are supplemented by employer

concerns for balance and overall staff competence when the faculty of a department, instructional group, or total school is considered. Employing officials must consider not simply the selection of competent individuals but also the need to select individuals whose competencies, interests, teaching styles, and so forth combine effectively with other staff members. Unfortunately, some large urban school systems have been forced to utilize an employment process through a centralized division of teacher personnel which may inhibit such quality control. Where school principals must accept any teacher assigned to their school by a central office, teachers are more likely to be viewed as "interchangeable parts" of an educational production line rather than as professionals whose special talents can combine with those of colleagues to provide an invigorating learning environment. How employment decisions are made, therefore, becomes a vital link in the quality control process.

Supply and Demand Factors

Teaching Shortages. During the late forties and for the next twenty years thereafter the nation experienced a critical shortage of classroom teachers. This problem was caused in part by the country's participation in World War II and the skyrocketing birth rate following the war. The teacher shortage had a devastating impact on the educative process. School officials were forced to employ stopgap procedures. Immediate results of the shortage were increases in class size, initiation of double shifts, and the issuance of emergency teaching certificates. During this period grave concern was expressed over the increased use of emergency certificates. It was indicated that the acute shortage of doctors during the war did not bring about lowered standards for medical practitioners. In many instances quantity took precedence over quality in order to put teachers into classrooms.

In response to this national problem, teacher education institutions accelerated their efforts to prepare teachers. Access to teacher education became relatively easy, with colleges accepting anyone who applied (Lortie, 1975, pp. 17-18). In addition, students were often passed along even though they were unsuited for the teaching profession. During this period little attention was paid to the application of stringent quality control procedures, either in teacher education programs or in the employment of teachers.

Teacher Surplus. Currently, many educators are calling for the utilization of measures designed to upgrade the teaching profession. The rekindling of this concern has been triggered by three factors in particular: a recent decline in births, a decrease in the number of new teaching positions, and the continued preparation of large numbers of new teachers. These conditions have contributed to a surplus of teachers prepared to assume classroom responsibilities, although some educators suggest there still exist drastic shortages of qualified teachers in many areas (Corrigan, 1974, pp. 196-98).

School systems presently are in the unique position of selecting applicants from a large pool of certified teacher education graduates. Some administrators and school board members argue for the continued preparation of teachers without restriction in the belief that the larger

manpower pool allows them to recruit better teachers (Illinois Task Force, 1975, p. 14). In reality, however, does a larger number of candidates necessarily result in a better selection process at the local level? Have school districts developed systematic plans for identifying the most capable and most qualified teacher applicants from this large pool of potential employees?

Variables in Effective Placement

Needs Identification. Local education agencies have primary responsibility for the selection, employment, and continuing professional development of teacher personnel. The first stage in carrying out that responsibility is the identification of critical needs that exist at the local school level. The second stage is to match those needs with teacher skills and competencies.

Accountability. Accountability to the community is an obligation which confronts every local education agency. School system budgets are being adversely affected by declining enrollments and a growing community resistance to tax increases for support of school programs. Local education agencies are nonetheless expected to initiate activities designed to upgrade school programs. One profitable focus of such activities is on measures to identify and employ those teachers who possess qualities and competencies that appear most appropriate to meet specific needs of the district and the local school.

Professional Commitment. A criterion worth including in the selection/employment procedure is professional commitment to teach in a certain type of school with a specific student population. Professional commitment has been recognized as the single most important quality that teachers should possess (Corrigan, 1972, p. 126). Given the parameters of a teacher surplus and the need to staff schools with the best qualified persons, it is for local school districts to consider employment policies and practices designed to match candidate commitment with student needs.

Other Teacher Characteristics. A set of competencies, qualities, and characteristics such as those suggested by Ryans (1960, p. 366) can be used as a guide in the employment of personnel to staff local schools. An additional variable is the individual personality. Getzels and Jackson (1963) extensively reviewed research published since 1950 which focused on the teacher's personality and characteristics. The authors acknowledged that the personality of the teacher is an important variable in the classroom. B. O. Smith (1969, p. 83) observed that personality is sometimes used as a criterion in the selection of prospective teachers. Can this variable be used in a meaningful and realistic manner for the selection of teacher personnel? Are there personality instruments currently available which can be used at the school level to improve staff selection?

College Evaluation of Students. An important aid to employment and placement of new teachers is the information provided by the preparing institution. Letter grades in key courses such as student teaching offer only gross assessments and give no indication of aspects of teaching

which may represent special strengths or weaknesses of the candidate. Many institutions have moved to a "pass-fail" system for student teaching, accompanied by a narrative report and detailed evaluation form which describe experiences students have had and indicate areas of particular significance. Other institutions have required students to provide a video- or audio-cassette tape which the students believe is representative of their teaching performance at the conclusion of student teaching and the professional sequence.

Continuing Professional Development of Classroom Teachers

Not only must school officials attempt to employ highly qualified personnel, but they also must expand and improve programs of inservice education and continuing professional development for their present staff. Colleges of education must remain intimately involved with local school officials and with the organized profession and assume partial responsibility for the continued assessment and professional development of teachers and other school personnel. However, local education agencies cannot evade responsibility for evaluation of their staffs by relying solely on success in graduate programs. A variety of formal and informal collaborative arrangements must be established among local education agencies, the organized profession, and teacher education institutions to facilitate the concept of lifelong learning for school personnel. Further consideration of such arrangements will be found in section G, which is concerned with inservice education.

Community Participation in Employment Decisions

Local Dissatisfaction. In past years, and especially during the early sixties, parents and community leaders aggressively sought to participate in local school decision making, including the selection of personnel and the expenditure of funds (McCoy, 1970, p. 175). Major issues identified by citizens included the poor academic performance of a significant number of children attending public school, irrelevant curricula, and teachers insensitive to the needs of local children. As a result of citizen protests, many local education agencies sought to expand the concept of community participation.

The Ocean Hill-Brownsville School District in New York is an example of one level of involvement given citizens in the management of a school district. The New York Board of Education agreed to the creation of local school governing boards composed of parents and teachers. Authority was granted citizens to participate in decisions involving staff selection (including building administrators), expenditures, and curricular matters (Berube and Gittell, 1969, pp. 13-14).

A contrasting example of citizen participation occurred in the Chicago Public Schools. The Board of Education approved the establishment of local school advisory committees. Each school was permitted to establish an advisory committee composed of parents, teachers, students, and representatives from community organizations; their authority was limited, and they operated principally in an advisory capacity. Variations of both community participation models developed in a number of school districts throughout the country during this period.

Legal Issues

Employment. School officials must tread cautiously as procedures are instituted to measure suitability to teach in a specific local school district. In recent years the federal government has initiated a number of practices designed to ensure the protection of civil and human rights. Title VII of the Civil Rights Act of 1964 was originally intended to prevent the discriminatory hiring practices manifested by private industry against minority groups. The Act was later amended to prohibit such discriminatory practices in state and local governments, including schools and institutions of higher education. As criteria are used in the teacher selection/employment process, care must be taken to guarantee that there is a direct relationship of the stated criteria to job performance.

Legal issues may arise as employment policies are established that seek to match teacher skills and interest with the needs of local schools. A major concern should be the employment of the most qualified to fill school needs, while ensuring that each school maintains a faculty reflecting ethnic diversity. This need may well become a critical problem to those districts that were or are presently under federal court orders to desegregate school personnel. Given these conditions, can selective employment policies operate effectively without exacerbating already tense racial and ethnic relationships?

Evaluation. The Civil Rights Act has similar application in the evaluation of teacher personnel. As school officials develop and implement procedures attempting to assess the effectiveness of classroom teachers, they must ensure the protection of human and civil rights. The current interest in relating student achievement to the performance of teachers as a basic criterion in the evaluation process grew out of the desire to add specificity to the role of the classroom teacher (Popham, 1973, p. 3). This process is highly significant because it could lead to suspension, termination, withholding of salary increases, or reductions in salary.

Although considerable attention has been directed to the subject of teacher evaluations, no method has gained universal approval. Some of the major problems associated with the use of competency based evaluations, skills assessment, or performance based schemes lie in an inability to control the external variables that may directly or indirectly affect outcomes. Another problem is that no one system of evaluation can be applied to an entire school district. Consideration must be given to such factors as environmental conditions, parental support to school personnel, school attendance data, support given teachers by local administrators, and so forth. Although a number of recent and refreshing insights (Walberg, 1974) have illuminated the issue of teacher evaluation, instruments are still needed that adequately and fairly measure performance while assuring the rights of teachers.

G. RETENTION AND TENURE DECISIONS AND THE ROLE OF INSERVICE EDUCATION

This paper emphasizes the importance of an integrated and sequentially designed program of quality control in teacher education which begins with

a student's admission to a college or university and extends throughout the career of the teacher. In such a system every decision point makes a significant contribution to the whole. The unique contribution of the stage associated with the retention and/or tenure decisions of an employing school system is its shift from emphases which have been primarily predictive in nature to assessment of performance in an actual community-school-classroom-individual learner context.

Shifting from Generic to Situation-Specific Learning

Prior to this stage the employing school system has looked to candidate credentials and recommendations, training program objectives and components, and institutional reputations as predictors of the subsequent effectiveness of that individual in a teaching assignment. The kinds of sequentially designed field experiences described earlier permit assessment of candidate skills in particular teaching tasks and classroom situations during the preservice preparation program. The teacher's capacity to put all of those learnings together and apply them effectively in a classroom setting for which that individual has full responsibility provides the most valid assessment of that individual's professional competence.

Generic Knowledge. Preservice preparation experiences have necessarily emphasized generic kinds of knowledge and skills judged to provide a foundation for successful teaching in a specific setting and with particular student characteristics and needs. This is not to say that learning experiences have dealt generally with the responsibilities of teachers, for that would deny the understandings that result from experience in real situations. Instead, an emphasis on generic knowledge acknowledges the broad range of specific learning situations teachers encounter, even within a single community or school system, and attempts to identify their common threads or principles.

Situation-Specific Training. This conception of preservice preparation recognizes the impossibility of situation-specific teacher education conducted outside the unique teaching-learning milieu. Rather than seeking to prepare individuals for particular assignments (which neither institutions nor candidates can predict with any certainty) most preservice preparation programs seek to identify and communicate generic teaching knowledge and competencies and instill values supportive of continuing learning. Faculty are encouraged to be flexible in teaching approach in order to relate functionally to varying teaching tasks, learning styles, and needs of their students. In most instances, generic knowledge and skills will be transmitted through the use of concrete examples and real situations. At this point the purpose of the specific is to illuminate the generic. The objective of the preservice program is not that of enabling the new teacher to ease into a first teaching assignment with a full repertoire of behaviors precisely attuned to that circumstance. Instead, it is one of providing the intellectual and experiential underpinnings that will enable the new teacher to be sensitive to the realities of that assignment and to benefit from learnings now centrally focused on applying conceptual learnings meaningfully to individual learners and to instructional groups.

Needs of the School System. After employment begins, the character of professional education alters. The question asked by an employing school system shifts from "Has this individual exhibited potential to do the needed instructional job for our school system?" to "Has this individual demonstrated in our school system the kind of effectiveness needed to make us confident about retaining that individual and making a long-term, perhaps lifetime, commitment?" The school system's judgment is very properly narrow and situation-specific in contrast to earlier judgments of the training institution and certification authorities. It contrasts as well with subsequent judgments that register the profession's assessment of that individual as a career teacher-scholar. The obligation of schools to provide relevant, high quality educational experiences for those who attend makes it incumbent upon school authorities to ask whether a particular individual has demonstrated ability to do a particular instructional job. School officials ought to be concerned as well with the nature and quality of preservice experiences and with the long-term professional development of career teachers; they must, however, focus on getting and keeping those who can perform tasks defined as essential to that school district.

Continuing Education. Between initial employment of a teacher and a decision about retention for another employment period is a period of continuing education. It is also a period of assessment of previous learning and present practice. Two dimensions of continuing or inservice education exist. One derives directly from the experience of teaching--that is, the learning that stems from doing the job for which the individual was employed. The other dimension is that which the individual and the school system decide is important to the further development of professional competencies in the teaching assignment. The culmination of the inservice component of the teacher's professional development is an education which has enabled that individual to function effectively in a particular school culture. The record of performance in that environment and the record of accompanying inservice education experiences should provide the school system with data necessary to extend or conclude the employment of a staff member.

Related Issues. Several important issues are raised by this view of school system decisions relating to reappointment and tenure. Who will determine the level of proficiency necessary to gain tenure? Who should be involved in the process: supervisors? fellow teachers? state agency personnel? parents? students? representatives of the organized profession? teacher educators from the preparing institution? How can tenure laws and procedures be altered to permit such an approach without alienating both school boards and teachers? Can tenure procedures that are truly school-specific actually work? What would happen when teachers change assignments within school districts? Must such personnel undergo intensive additional training to meet the needs of new schools? Would such a plan weaken and ultimately serve to abolish teacher tenure policies?

Linkages with Certification

The evaluation process just described represents a critical link in the multilevel certification plan discussed earlier. Under that plan, certification upon completion of a preservice program is intended to register an informed professional judgment that an individual has acquired a "safe" level of knowledge and skill sufficient to begin the practice of teaching. Any extension or renewal of that preliminary certification needs to be based on the individual's demonstrated capacity to apply initial learnings to a specific teaching-learning environment at a level judged satisfactory to professional colleagues. Continuing certification, still for a fixed period of time (perhaps five years with possibilities for renewal or extension), is granted to individuals capable of demonstrating the successful application of generic concepts and principles to a particular environment and who have been enriched by appropriately related professional and academic studies. Continuing certification should not be attained simply by completing additional formal studies. It follows demonstrated teaching competence enriched by job-related studies. The certification process should provide for input from personnel representing training institutions, the state agency, the organized profession, and the school system, in order to support the continuity of phases of professional development. This process will ensure that continuing certification is not withheld from an individual because of biases in the judgment of local employing officials or teacher colleagues.

Opposition from Teacher Groups. An important issue stemming from such a plan for reappointment and the awarding of continuing certification relates to the traditional and sometimes appropriate opposition of teacher organizations to evaluation. As a consequence, teacher reward systems typically have been linked to service years or to the completion of formal degree programs rather than to evidences of effective performance on the job and professional growth experiences directly relevant to that assignment.

Impact of Supply and Demand Realities

Undoubtedly, supply and demand factors represent an increasingly important influence on quality control at the decision point of retention and tenure decisions. Given a large supply of new teachers seeking positions and greatly increased employment stability of the current teaching staff, some school systems may become more reluctant to offer tenure to personnel concluding what would normally constitute a regular probationary period. Can school districts, on the basis of supply-demand data, refuse tenure to a staff member who has performed in a highly satisfactory fashion? An increasing proportion of many teaching staffs will consist of older tenured teachers. What will be the effect of such a shift on the inservice education programs of school districts? How will such changes affect enrollments in undergraduate and graduate programs of area colleges? Should expanded inservice education activities be supported by funding school systems, colleges, or some combination of both?

Present Inadequacies of Supervision and Inservice Education

The proposed quality controls associated with retention and continuing certification require significant resource allocations for both supervision and inservice education. The traditional practice whereby institutions terminate their relationship with new teachers at the conclusion of the preservice program is entirely inadequate for such a plan. Continuing contacts occur, in most cases, only if the individual decides to enroll in a formal graduate program at that institution. School systems are often unable to provide regular intensive supervision of beginning teachers. As a consequence, many new teachers launch this critically important phase of their career with little help from either a college or their employing school system. There is little point in speaking of "demonstrated competence" in applying important teaching concepts to particular teaching learning situations, because neither the training institution nor the employing school system has established the mechanisms for securing such data. In only a few instances, and most frequently in relation to grant-supported programs in fields such as vocational education, do training institutions allocate staff time to the follow-up of graduates during their first year of teaching.

Several recent teacher education reports (the report of the AACTE Commission on Education for the Profession of Teaching [Howsam et al., 1976, p. 100]; and the Ryan, Kleine, and Krasno study of Ohio teacher education [1972, pp. 13-19]) recommend a five-year program of initial teacher preparation, with the fifth year to include a teaching internship. Under this plan the employing school system and collegiate training institutions could collaborate in providing continuing consultation and supervision to beginning teachers. Such supervision, if joined with inservice education opportunities involving some of the same personnel, could provide a close link between teaching problems experienced by the beginning teacher and the inservice education program. School system supervision could then be provided not only by systemwide or district supervisors, but more directly and regularly, by senior teachers assigned to work with an appropriate group, perhaps four or five new interning teachers.

Supervision of the beginning teacher has been inadequate; inservice education programs offered in most school systems have been more deficient. In many school districts inservice education programs remain minimal, fragmented, and without a long range design focusing on the most critical needs of that system. Don Davies, USOE Deputy Commissioner, testifying in 1967 before a Senate subcommittee on education, characterized inservice teacher education as "the slum of American education—disadvantaged, poverty stricken, neglected, psychologically isolated, riddled with exploitation, and broken promises, and conflict." The same point was made more recently by Roy Edelfelt (1974, p. 250) of the National Education Association, who maintained that preservice preparation of teachers, having received almost all teacher education resources and affort for four decades, no longer needs such concentration; inservice education remains "a wasteland" that takes the teacher's time and money and "violates almost every principle of good teaching." Furthermore, stated Edelfelt, it has not emphasized "improving teacher performance."

Differentiating Inservice Education from Continuing Professional Development

An issue of considerable importance grows out of the current confusion of objectives for inservice education and those for the continuing professional development of career teachers. Recent federal legislation has provided funding directly to school systems for teacher centers. Colleges and universities seeking to justify budget allocations have frequently abdicated their responsibility for continuing professional development of teachers by approving for graduate degree requirements a collection of inservice education situation-specific teacher development experiences. Such courses or experiences may contribute to a career development program, but they cannot determine its character, for their purposes often differ.

School systems should not expect formal graduate degree programs to substitute for their own critical assessment of faculty competencies for tenure and salary decisions; neither should institutions of higher education or teacher organizations assume that employer based programs of inservice education can meet the broad obligations of career development for teachers. Confusing the particular functions of preservice preparation, inservice education, and continuing professional development can only weaken the effectiveness of each. With the assistance and support of state educational agencies, colleges and universities, employing school systems, and teacher organizations should all be involved in the preparation of teachers at each level. The role and degree of involvement for each, however, will vary considerably from stage to stage.

Position Statements. This paper differentiates rather sharply between inservice education and continuing professional development. The distinction is one supported by Smith and Orlosky (1975, pp. 179-80) and by the AACTE Commission on Education for the Profession of Teaching (Howsam et al., 1976, pp. 102-103), who define inservice training as "any training of school personnel to prepare them to satisfy a need of the school system." That is, "deficiencies in the instructional, administrative, and support services of the school" shape the content of the inservice training program. In contrast, developmental education "consists of experiences and studies to satisfy the personal needs of the school personnel." That is, "the interest of each individual in his own personal and professional development and career advancement" comprises the content of the program.

Supporting the involvement of universities in inservice programs, Smith and Orlosky (1975, pp. 188-92) emphasized that inservice education differs from university based programs of personnel development. In their view, university resources should be made available to school systems as needed to meet personnel training needs. In contrast, university based programs of personnel development are designed to prepare selected individuals for specialized functions at all levels. They concluded that "the inservice program should be clearly distinguished from the specialist program" (p. 195). The purpose of the inservice program, which is school based, "is to induce concepts and skills to meet the needs of the system." The specialist program, university based, "involves the schools as a laboratory and a source of instructional assistance."

The CEPT Report (Howsam et al., 1976, pp. 102-103) concurs, holding that "school systems become the chief locus for inservice education" in order to remain "maximally responsive to school and community needs." The report suggests that "proficiency," "mastery," and "brilliance" are objectives of continuing professional development and that "the major vehicle for carrying out professional development objectives still doubtless remains the graduate programs of the colleges and universities, enriched by the collaboration of school systems." Professional organizations will contribute through "publications, conferences, and other educational activities" (p. 103).

Related Issues. Many issues stem from these statements of position regarding inservice education:

1. If inservice education is to be primarily situation specific and employer based, what is the appropriate role for colleges and universities? Are they properly respondents to requests for assistance and resource use by school districts, or should they have a part in the design of inservice education programs?

2. What part shall individual teacher interests play in programs of inservice education? Can some appropriate mix be established which responds to individual teacher needs as well as to those identified by school system planning bodies?

3. What is the appropriate role of teacher professional organizations in planning and implementing inservice education programs?

4. Can inservice education objectives and those of continuing professional development be combined in a university based graduate program? If so, are there any particular proportions to be maintained between the two program elements?

5. Do teachers need advanced degrees in order to document their appropriateness for continued employment or tenure?

6. Who should pay for inservice education programs--the individual teacher, the employing school system, a state or federal agency, some combination of these?

The Future of Inservice. Additional provocative questions posed by Edelfelt (1974, p. 252) as he speculated on the future of inservice education concerned the following: whether inservice education becomes part of the teacher's job and is conducted on the employer's time; the reward system for inservice education; the extent to which inservice education should be related to proficiency or competency goals; satisfaction of local needs versus more universal and generalized requirements; its relation to continuing employment, tenure, higher levels of certification, or continuing certification; linkages between pre- and inservice teacher education; and the method of and responsibility for evaluation.

Importance of Collaboration

The teacher center, or personnel development center, is seen as a promising mechanism for fostering both inservice education and continuing professional development. Although critical issues of governance remain, there is agreement regarding the importance of collaboration among school systems, teacher organizations, collegiate institutions, and state agencies concerned with improving the effectiveness of instructional personnel. Without such collaboration there is little hope for meaningful quality controls at this key point in the career-long process of teacher education.

The Higher Education Task Force on Improvement and Reform in American Education (HETFIRE) (Denemark and Yff, 1974) holds that a personnel development center (PDC) can be located wherever personnel preparation and retraining happens.

For effective planning and evaluation of a PDC, HETFIRE advocates ten conditions, among them the concepts of cyclical patterns of planning, implementing, evaluating, and revising; allocation of resources; and significant involvement of public school personnel, people in communities served by PDC, and state government personnel. E. B. Smith (1970, pp. 253-55) notes that after the upheavals of the late 1960s, it is now hard to conceive of partnership without representation from community, student, and teacher groups, yet the press for accountability has tended to recast the partnership notion into a vertical systems model rather than one of shared decision making in an operation consortium.

Emerging Issues. Varying points of view exist concerning the organization and administration of centers designed to improve the teacher's capacity to respond to the needs of local children. Is it realistic to suggest that universities cannot train teachers? Are local education agencies better equipped to operate teacher centers? Can the various groups and organizations cooperatively plan and operate these centers? These are but a few of the critical questions surrounding this important issue.

Although it may be unrealistic to expect teacher education institutions to prepare students for the variety of specific teaching situations they may encounter in local schools, it is essential that these institutions cooperate with local education agencies and professional organizations to design and implement professional development programs responsive to both local needs and broader concerns of the profession.

H. CONTINUING PROFESSIONAL DEVELOPMENT: RECOGNITION AS A TEACHER-SCHOLAR

Most experienced teachers who remain dedicated to excellence in the classroom will utilize continuing education as an inservice function designed by schools and school districts with assistance and facilities provided by universities. Such teachers will become increasingly skilled practitioners who, throughout their careers, will bend their professional abilities toward improving their own situation-specific teaching skills. A smaller and more select group of teachers, those who aspire toward leadership and coordination roles within the profession, will advance to

the culminating stage in the eight-level process of individual quality control in teacher education. This level is designed to produce teacher-scholars committed to and capable of exercising instructional leadership in a broad range of educational circumstances. Some teacher-scholars will focus on the development of specialized skills that are supportive of quality classroom teaching and learning, but it is to be hoped that many will choose to retain a career-long involvement in direct instructional roles with children and youth.

Definition

As described by the Commission on Education for the Profession of Teaching (Howsam et al., 1976, p. 103), continuing professional development "reaches beyond the support of beginning teacher efforts to apply teaching knowledge and skills to particular school and community situations." Extending further than any specific needs of any given school system, it functions to develop "professional teacher-scholars, capable of high levels of diagnosis and prescription; coordinating the instructional efforts of other professionals and paraprofessional associates; and exercising leadership in school, community, and the profession." Because graduate programs provide "the major vehicle for carrying out professional development objectives," they and their relevance to the development of teacher-scholars represent the principal emphasis of the observations which follow.

Needs of Teachers

The decisions that affect students at the graduate level follow a pattern similar to those at the undergraduate level: admission, continuation or deselection, graduation, and credentialling. In theory, graduate programs should benefit from the interactive relationship between students' formal studies and their current or previous work experience. Undergraduate student motivations are largely anticipatory of a future teaching role, and undergraduate institutional decisions affecting students are largely predictive of future performance through evidences of current potential.

Graduate programs, in contrast, have the enormous advantage of building upon existing experience and demonstrated potential. Unfortunately, many graduate programs for teachers never exploit that advantage, but simply imitate the program patterns developed for students in the academic disciplines. In many instances, master's degree programs are incidental to completion of the doctoral programs which focus on the development of a high level of research competence, often in a narrow specialty. For several reasons, that pattern is ill-suited to the professional development needs of the teacher-scholar. First, graduate programs for teachers must be concerned with the applications of knowledge to the educational enterprise and to the improvement of teaching and learning. Second, these applications concern a reality not paralleled by traditional university disciplines or discrete college of education departments. Third, graduate programs serve two groups of clients: (a) a broad population base of teachers seeking to improve their performance in situation-specific skills through inservice training, and (b) a much smaller circle of experienced

teachers who will become instructional leaders, coordinators, researchers, generators of ideas to expand the knowledge base for the education profession--in other words, teacher-scholars.

Graduate Enrollments: Some Implications

Enrollments in graduate schools increased 123 percent between 1962 and 1972, although this increase is expected to slow down to 16 percent between 1972 and 1982 (Frankel and Beamer, 1974). Specifically in education, graduate enrollments continue to increase rapidly although prospects for teaching jobs look bleak. Much of the increased enrollment appears to be the result of "defensive credentialling"--that is, teachers who seek to stave off dismissal by securing a master's or doctorate in education (Association of Graduate Schools, 1976).

Program Quality. These enrollment levels have implications for graduate programs in education. At present, faculties have been increased to record strength. If on-campus graduate enrollments drop off, two strategies are predictable: (a) easier admission requirements to keep classrooms full, and (b) expansion of off-campus offerings. The danger inherent in both strategies is erosion of program quality, a possibility that implies greater need at this point for control of program quality.

Educators applying for graduate study have completed an undergraduate teacher education program, and most have added several years of teaching experience. These educators need to be provided with the highest quality graduate and/or inservice faculty development experience possible, depending on their motivation and abilities. Most will elect inservice training to enhance situation-specific skills. Achievement of teacher-scholar status is clearly not for all and is neither the result of, nor the reward for, years of faithful service. Whatever their career goals, the number of capable, experienced teachers who should be enrolled in graduate programs must increase.

The Theory-Practice Issue

Quality control at the graduate level is oriented primarily to academic aspects rather than related extensively to practical competencies required in the classroom. In some cases the two are congruent, but generally admission, retention, and graduation follow a university-oriented rather than field-oriented model.

Master's Programs. Currently, master's degrees are used chiefly for two purposes by educators: (a) to attain higher levels of certification and salary, and (b) to enhance specific practical skills. Specific exit skills related to job competencies often are nonexistent or at least not well articulated, because master's degree programs are designed to be general. Can such programs be used legitimately as a basis for upgrading certification and pay if their relationships to on-the-job competencies have been neither planned nor established?

Doctoral Programs. Doctoral programs usually relate even less to public school job performance criteria. The emphasis is on producing a

scholar in the field of study, whose exit skills are primarily in research and writing--witness the nature of the final examinations and the dissertation. From the standpoint of preparing individuals to further their knowledge and apply theory to practice, is the current doctoral model satisfactory? Colleges of education should perhaps describe more carefully the goals and purposes of their doctoral programs. Smith and Orlosky (1975, p. 193) suggest that candidates for advanced degrees "should be required to demonstrate . . . mastery of the knowledge expected . . . and the skills to apply it" in the sense of professional service rather than in the meaning of self-improvement or nonservice pedagogy. Professional service, however, involves not only service to clients but also leadership within the profession. Such leadership must be based on rigorous training in generic and theoretical areas through university based programs that are wholly differentiated from situation-specific inservice programs.

Theory vs. Practice. The degree to which graduate programs should meet specific, practical needs depends on whether they are linked to school system-oriented inservice programs or to the objectives of continuing professional development. It is clear that stressing job preparation in a program means that admission characteristics should relate to, or be predictive of, the competencies required on the job. Some specific programs and courses, especially those offered on-site in school systems or developed expressly to meet particular school system needs, relate directly to actual classroom skills. The question is, how practical can a program be and still have meaning in the "scholarly" realm of traditional graduate study? Perhaps one answer is to integrate more field-related or internship-type courses with the theoretically-oriented courses, thus providing the skills needed by practitioners and the theoretical base necessary for developing a broad conceptual framework for individual classroom approaches.

Situation-Specific Programs. Some skills cannot be adequately taught in graduate programs. For example, Roaden and Larimore (1973, pp. 50-65) hold that administrative skills can be learned only in actual settings where the pressures and responsibilities of the situation are brought to bear, and institutional programs can have little impact on graduates' success in administrative positions. Presage characteristics, coupled with the nature of the situation, apparently have a major influence on administrative success. Faculty critics within and outside departments of education question the quality of field based courses or programs (as in Personnel Development Centers). They cite inadequate library facilities, tired students, and lack of interaction with on-campus graduate students. Because students in such programs are often selected by the school systems, they do not always conform to the academic profile of on-campus graduate students. How should a department or college of education balance the obligation to serve particular competency needs of school systems and teachers and the need to satisfy university colleagues that "quality" standards are being applied? The institutional context of graduate student selection and retention operates within a framework that places a premium on the most academically talented students and on courses that meet established views of quality in the liberal arts tradition. Service to field locations is not a part of this model, although

service is an essential component of the professional teaching model. Here, then, is the dilemma of training within the traditional institutional context a field-oriented clientele with a broad range of program needs and abilities.

Selection of Students. Standards for graduate students usually evolve from a combination of requirements and decisions by program areas, colleges of education, and graduate schools. Arguments favoring the inclusion of teachers and other educators in the student selection process seem logical when viewed from the standpoint of the total career development of teachers; nevertheless, college and university faculty members usually demand the prerogative to choose those with whom they will associate in the close relationship of mentor-student. If, however, colleges of education are viewed as the training arm of the profession, do not teachers have a place in the student personnel decision process? Perhaps as with accreditation, such outside pressure could provide colleges of education with the leverage to adapt student decision standards to the reality of serving a heterogeneous clientele. It is important, however, that the colleges and universities ensure that those who will become researchers and developers of new knowledge about teaching and learning--that is, the teacher-scholars--be selected and encouraged on the basis of rigorous standards and the best predictive evidence.

Academic Success Predictors

Most graduate programs emphasize academic and intellectual qualities in the admissions process; some require a certain level of experience, which probably helps the student relate the theoretical to the real world.

Admission. Measures of success in graduate work have centered primarily on grade-point average (GPA) and program completion. There are a number of student quality checkpoints in graduate programs (admission, qualifying exams, comprehensive final exams, and dissertation planning and execution), but most students who persist are able to complete their programs. A study of 8,000 doctoral program dropouts and 7,000 Ph.D. recipients confirmed this fact by revealing that most of the students who failed to complete their degree lacked sufficient motivation (Tucker, Gottlieb, and Pease, 1964). The crucial quality decision point for the institution, therefore, is program admission.

The decision to grant admission to graduate study is typically based less on job performance factors than on prediction of academic success, yet efforts to determine the best predictors of success in graduate work have been less than fruitful. The reasons are probably tied to the fact that both sides of the correlation deal with a restricted range: (a) students seeking admission to graduate work come from a select group of about 25 percent of the population who complete baccalaureate degrees, and (b) graduate grades are almost exclusively in the "A" and "B" categories. Therefore, a relatively intelligent group of candidates score across a range of 200 to 800 on the Graduate Record Examination (GRE) for various reasons, including weaknesses in test design, and proceed to earn uniformly high grades in graduate coursework.

Retention. The rigor of graduate study is betrayed by a grading system which looks with suspicion upon a "B" and totally rejects a "C." Once admitted, graduate students are unlikely to face suspension for inadequate academic ratings. Retention processes operate rather on the persistence with which students are willing to pursue their programs despite bureaucratic tangles, rules, and requirements. Discouragement is the counterpart of undergraduate suspension.

Instruments. As with undergraduate teacher education, the current admission-retention-graduation decision processes utilized with graduate students are imprecise and often criticized for being inappropriate as well as for excluding those groups which do not score well on standardized tests. Some teacher educators argue that tests of academic aptitude provide a crude measure of students' ability to deal with abstract concepts, to conceptualize research, and to deal effectively in the verbal dimension. Others maintain that many of the instruments used contain cultural biases which discriminate against minorities. Many cannot be defended as being relevant to successful job performance.

Most graduate admission decisions are based upon undergraduate GPA and some test scores such as the Miller Analogies Test (MAT) or the GRE. Critics are quick to point out the questionable correlations of these criteria with success in graduate school. As a result of a survey of 43 correlation studies in predicting success in graduate school from 1952 to 1972, Willingham (1974) concluded that the undergraduate GPA (UGPA) and the GRE Advanced Test are generally the best predictors. The Advanced Test, however, is not a particularly good predictor of success in graduate work in Education. The GRE correlation with graduate study success is positive but not high; its predictive validity varies depending on the field of study.

Although motivation is a key factor of persistence in graduate study, the UGPA is a measure of academic talent, and therefore predicts only similar kinds of behavior at the graduate level. Lunneborg and Lunneborg (1973, pp. 379-87) found the UGPA to correlate positively with first year performance in graduate school, but not with eventual success. Willingham's (1974, pp. 273-78) review of the literature revealed that the UGPA had a respectable correlation to first year graduate success but low correlations with "time to doctorate" and "attain doctorate."

Another popular selection test is the MAT. Studies by many investigators (Schwartz and Clark, 1959, pp. 109-11; Ayres, 1971, pp. 491-95; Durnell, 1954, p. 107; Platz, McClintock, and Katz, 1959, pp. 285-89) challenge its effectiveness as a predictor of success in graduate study. An interesting aspect of the Durnell effectiveness study was the finding that a very high score on the MAT may be less indicative of scholastic success in Education courses than is a score closer to the mean.

In Summary

The measuring tools available for predicting academic success are still quite inaccurate. Relatively little effort is being made currently to screen on professional competence criteria (although there are exceptions, such as programs in psychological testing and special education). There are compelling reasons, however, to be less concerned with admission

criteria and to devote the closest attention to providing creative graduate programs of high quality for those educators who are in the public school classrooms and whose ability to teach and interact with children can be enhanced through appropriate graduate experiences. Such programs, however, must differentiate between continuing education in school-oriented programs designed to enhance the situation-specific skills of career teachers, and continuing professional development programs designed to train a much smaller group of teacher-scholars.

III. AN OVERVIEW OF INSTITUTIONAL QUALITY CONTROLS

A. ACCREDITATION

Accreditation can be described broadly as a peer evaluation process conducted by private education associations of regional and national scope, which recognizes "an education institution or program of study as meeting certain predetermined criteria or standards" (Miller, 1973, p. 6).

Types of Accreditation

"Institutional" accreditation, where the entire institution is evaluated, is usually performed by regional accrediting agencies, such as the North Central Association or the Southern Association. "Specialized" or program accreditation involves the evaluation of particular fields of study and is usually carried out by the accreditation arms of professional societies or particular accrediting agencies set up for that purpose, such as the National Council for the Accreditation of Teacher Education (NCATE). State departments of education also conduct program accreditation, utilizing evaluative criteria similar to those of NCATE.

Purposes of Accreditation

In most countries, national agencies sanction, evaluate, and control institutions and programs. Since this kind of national control has never existed in the United States, the public and the professions have sought some indicators and assurances of quality in institutions of higher education. Accreditation, as a service to the public, provides guidance about institutions or programs which have attained at least minimal quality according to accreditation standards. Accreditation also fosters institutional self-improvement, through the self-study associated with the accreditation process and the motivation for non-accredited institutions to improve their programs. Accreditation facilitates the transfer of students from one institution to another by giving some assurance of quality and by suggesting consistent transfer procedures. Accrediting agencies set and monitor standards among training institutions, thus encouraging higher professional quality among students and faculty.

Prospective employers often regard accreditation as a sign of quality training. However, the value of national accreditation in teacher education has never matched the importance associated with accreditation in fields such as medicine, law, and engineering, where accreditation has become essentially a compulsory process. In contrast, only about 40 percent of teacher education institutions submit to NCATE review.

Impact of Accreditation

Accreditation can have a powerful influence on an institution's ability to attract competent faculty and students. Many federal and state grants require that the receiving institution be accredited. Without such aid, non-accredited institutions often find it even more difficult to attain the standards required for accreditation. Many states provide for

reciprocity in teacher certification, which frequently is based on NCATE accreditation of the program from which the candidate was graduated.

Accreditation Processess

Basic steps in the accreditation process include establishment of standards, inspection of institutions and programs by competent authorities, publication of a list of institutions judged as meeting the standards, and the carrying out of periodic reviews.

Rolf W. Larson (1974, p. 2), Executive Secretary of NCATE, identified four basic accreditation problems in the area of teacher education. These are: allowing for institutional differences in a common accreditation evaluation, basing accreditation decisions on real college substance rather than on elements of form, determining the actual focus or function of accreditation, and determining the real qualifications of the graduate.

Issues Relating to Standards

Applicability. Are standards for accreditation of teacher education to be minimum standards which all institutions shall meet? Or are accreditation standards designed to stimulate institutional self-improvement? Is it appropriate to establish a single set of standards that will be applied to every institution, regardless of size and availability of resources?

Expectations. The accreditation process has been heavily oriented toward institutional factors such as number of books in the library; number of faculty with doctorates, public school experience, publication record; and total institutional commitment. Should greater emphasis be placed on output indicators? Is there a crucial link between institutional and program characteristics and the ability of graduates to perform in the classroom? Should accreditation seek to establish this link, or simply certify that minimum resources exist and minimum standards have been met?

Special Cases. Would a firm adherence to standards impose hardships on developing institutions and historically "black" colleges? These have not received funding in the past to support the quality standards possible for others. Would such institutions require time and funds for special development?

Relevance of Standards. Many individuals competent in particular teaching situations have attended unaccredited institutions or are not college trained. The Study Commission on Undergraduate Education and the Education of Teachers (1976, pp. 138-39) argues that both accreditation and certification should relate to the competencies required of teachers, specifically competencies required with particular situations, communities, or various cultural groups. Hence more substantive and relevant accreditation standards are needed.

Issues Relating to Reliability and Validity of Judgments

Limiting the Area of Assessment. Should teacher education accreditation continue to focus almost wholly upon the professional dimension? Preservice teacher education programs consist primarily of Arts and Sciences courses, with less than one-fourth of the student's work taken in colleges of education. Is it valid to base accreditation of a teacher education program solely on an evaluation of the education portion of the program?

Subjectivity. Accreditation lacks adequate objective methods of measurement and evaluation, and often relies on either professional expertise and subjective judgment or superficial quantitative measures.

Relations to Effectiveness. Current practices rely heavily on input evaluation. Accreditation standards encourage follow-up of graduates, but the relationship of program to job market competencies is seldom established. Few attempts are made to validate accrediting criteria according to predictive validation or content validation models. Those whose expertise and judgment are utilized in the accreditation process should systemize and publicize the criteria upon which they base judgments.

Issues of Governance and Control

Until recently higher education, as mandated by the National Commission on Accrediting (NCA), exercised majority control over NCATE accreditation. National Education Association (NEA) pressures caused realignment of the governing council and provided for equal representation of the NEA and AACTE, with representatives of three other organizations composing the remaining one-third of the total.

Teacher Educators vs. Teachers. Most college based teacher educators maintain that professional teacher education personnel should dominate policy-making and decision-making bodies of NCATE. They argue that teacher education specialists know best what should be included in teacher education programs, that colleges of education bear the bulk of accreditation expense, and that diffusion in control has weakened the process as a quality control mechanism. Professional teacher organizations contend that teachers should control the accreditation process, maintaining that teachers know more about the act of teaching and therefore are better able to advise on teacher education program content and strategies.

Standards. Should responsibility for establishing standards be lodged primarily with representatives of the institutions offering programs, with teachers (the program clients), or with school officials (the employers of program graduates)? If a function of accreditation is "consumer protection," what role should be exercised by the public and what agencies should be involved?

Personnel. Who should be involved in accreditation teams, review panels, the governing council of the accrediting agency, and appeals boards? Higher education personnel have been criticized for a reluctance to deny

accreditation to colleagues from sister institutions. State department and teacher organization representatives are sometimes alumni of an institution under review. The Student National Education Association (SNEA) has pressed for student representation at every level of the accreditation process. A major issue of special concern to institutional representatives is how field based practitioners can be involved in the accreditation process without including in decisions of vital importance to the institution persons who are unfamiliar with the operation of higher education or are influenced unduly by organizational objectives unrelated to program quality.

Accreditation: Mandatory or Voluntary?

Traditionally, higher education has favored voluntary accreditation because its primary goal has been to improve institutions, and many colleges have wanted to maintain a favorable cost/benefit ratio in their teacher education programs (Cyphert and Zimpher, 1975, p. 5). The teaching profession, on the other hand, supports a mandatory approach which would enable teachers to have some voice in program design and content. Mandatory accreditation could eliminate about 25 percent of current teacher education programs. Accreditation criteria, however, would first have to be linked more definitively to the production of quality teachers.

Financial Issues

Perhaps the major issue confronting teacher education accreditation is the conflict between the desire for a higher level of reliability and validity and the desire for a simpler and less expensive process. Team size and expense are growing, standards are more complex, but budget limitations prevent adequate training for teams and evaluation panels. Cost analyses conducted several years ago by several state universities reported expenses in excess of $100,000 for an NCATE visit. Those same institutions undergo regional accreditation studies, and many are reviewed by their state department of education and federal agencies as well. The development of statewide councils on higher education in many states, and internal program evaluations, generate additional review processes.

National Data Bank

The establishment of a national data bank for teacher education offers one possibility for achieving greater efficiency in the accreditation process. Institutions agreeing to a common format for annual reporting of data useful in assessing their performance could employ these data to compare themselves with institutions of similar purposes and aspirations. This process could reduce the necessity for huge visiting teams, encourage annual (or more frequent) accreditation assessments, and permit visiting teams to function more as consultants than as investigators.

Recommendations for Reform

Concern about the accreditation process has generated many suggestions. The AACTE Commission on Education for the Profession of Teaching (Howsam et al., 1976, p. 123) asserted that accreditation should remain nongovernmental and should provide full disclosure to the public. Processes must be specific, detailed, and current to ensure quality (but not so complex that they will drain resources from the preparation programs), and must become less campus oriented, less fragmented by traditional degree distinctions. College based teacher educators and the public should be represented, and major emphasis must be placed on the products of training programs. Other recommendations (Miller, 1973, pp. 208-10) include the establishment of a national body to coordinate, monitor, and supervise accreditation of post-secondary education; and the use of independently appointed public representatives, utilizing a public hearing approach. The Study Commission on Undergraduate Education and the Education of Teachers (1976, p. 144) recommended that: teams should include students and representatives of diverse community and minority groups; substantive relevant standards should be developed; reports should be published and disseminated; and an appeals process to an independent outside arbiter should be available.

B. PROGRAM EVALUATION

A total plan of quality control must provide for program evaluation, which offers information about the merits of programs judged against broadly recognized criteria, and furnishes feedback for course and curriculum improvement, faculty recruitment, personnel policies, and development of student selection and retention criteria.

Curriculum Issues

Decisions relating to the nature, type, or philosophical approach of institutional programs relate to a number of issues. These include consideration of the merits of competency based and traditional approaches, the possibility of combining competency and "humanistic" program designs, the assigning of priority to extensive field experience or emphasis on theory, and training in specific as opposed to generic skills.

Content. Program planners are also concerned with curriculum content. What components relating to depth and breadth should be included? Do historical and philosophical components, for example, contribute to the ability of graduates to do their job? What should be the specific role and content of each course? Are there some training experiences that will produce "better" teachers than others?

Sequencing. A third concern relates to the sequencing and interrelationships of the components of the program. How should field and classroom experiences be ordered? What is the best relationship between theory and practical experience? Should professional education courses be interspersed throughout a four-year program, or should they be provided

in a "professional block"? If a five-year program is contemplated, should the fifth year precede full-time teaching or be carried on in conjunction with a paid, full-time internship?

Evaluation

Vital though these curriculum issues are, the overriding issue is that of determining whether a particular type of program, course content, or program configuration is, first, adequate, and second, better than another. Without some kind of reliable evidence resulting from program evaluation, the basis for making decisions about teacher education curricula remains that of collective professional judgment and speculation.

Nature of Evaluation. Evaluation, a process for collecting and utilizing information about programs or people, exists for the purpose of facilitating the decision-making process. Areas of evaluation (Dressel, 1976, p. 15) include planning, to determine needs, devise goals, review performance, predict developments; input, to relate resources to goals and consider alternatives; process, to provide periodic feedback; and output, to assess attainment at designated states. An alternative structure for evaluation suggested by Haberman and Stinnett (1973, pp. 149-50) identifies as its major dimensions presage (characteristics used to predict that a program will be effective), process (the nature of an intervention), and product (the outcomes of the process).

Evaluation Strategy. Evaluators, acting on their own training and orientation, utilize different assessment techniques. Generally, the process of evaluation includes eleven steps (Dressel, pp. 8-9): identification of program values; formulation of goals and purposes; determination of criteria for measuring success; obtaining and analyzing data pertaining to program activities; determining the extent of success and failure; indicating relationships between program treatment and outcomes; identifying unplanned effects; assessing the impact of uncontrolled variables; formulating recommendations regarding program changes; setting up a system of continuing review; and assessing the social utility of program objectives and processes.

Differing Perceptions of Evaluation. Evaluation is perceived differentially by program participants as providing valuable feedback for possible program revisions, as a threat, as a way of justifying program existence, and as a device used by program administrators to control the staff. The nature and objectives of the evaluation itself may affect this perception, and systems of evaluation can be designed to fulfill particular expectations. Evaluation in quality control, for example, often utilizes tests and grades and lends itself to use as a means of resisting change. Other types of evaluation are designed to facilitate continuous improvement through gradual change (Dressel, p. 15).

Obstacles to Evaluation. Because evaluation operates in real-life, action environments, it may conflict with institutional research needs and priorities. As a result, staff members may be reluctant to cooperate. Programs are complex and the isolating of significant components is not

only difficult, but also complicated by the fact that goals are generally not specific enough to measure. Rarely can control groups be set up, and in any case a program's impact may become evident only long after its completion.

Setting Program Goals and Objectives

Stating Goals. General directions and desired outcomes for particular programs are usually easy to determine. Difficulty arises when these outcomes must be stated in terms that can be measured. How does an evaluator know whether an objective is worthwhile, when it has been achieved, or how thoroughly the task has been done? Some program goals--such as including certain courses in every schedule--may be judged to have merit, but such goals provide no means of measuring the quality or relevance of the program itself. Some objectives--such as high scholastic achievement--can be measured accurately, but it is difficult to establish a causal connection between the program and the objective. Another issue relates to the degree to which overall program objectives limit faculty autonomy to determine course objectives and content.

Stating Competencies. Competency based programs attempt to establish causal relationships by requiring definitive statements of desired outcome behaviors, which are then converted to program competencies. Competencies stated as broad groups or categories provide more flexibility for faculty in designing individual components, but offer less structure in evaluating what each program graduate has accomplished. In addition, proponents of community- or culture-specific objectives disagree with advocates of programs designed to produce teachers more generally prepared who can adapt to a variety of settings.

Selecting Appropriate Criteria

Criteria specify the factors and levels which will be used to measure the differences affected by the program. The nature of the criteria selected influences staff priorities, predetermines some outcomes, and affects the integrity of the entire evaluation.

Seldom do selected criteria relate to the interaction between the education program and the student. Institutional or presage criteria are most commonly used in evaluating teacher education programs. These comprise professional, legal, public, and institutional criteria, all of which are removed from the act of teaching. Criteria associated with process evaluation include administrative, student, and faculty goals and values, which tend to place a low priority on teacher-pupil interactions. Criteria associated with product evaluation focus on pupil learning, teachers as change agents, and teacher behavior, but not on the relationship among these variables (Haberman and Stinnett, pp. 150-70). In all cases, causal links are difficult to establish.

Who Should Evaluate?

Discussion typically focuses on whether "insiders" or "outsiders" should do the evaluating. Insiders, who have greatest familiarity with

the program, are criticized for bias toward favorable findings. Outsiders possess greater objectivity, but may have difficulty learning what the program is really like. Little has been done to involve a wider range of concerned individuals in the determination of teacher education program quality. Systematic involvement of school system administrators, teachers, or parents in program quality evaluation is rarely implemented. Multiple involvement of groups with such differences in background and concerns would, of course, reflect many different perceptions of what constitutes program quality.

Quality of Data

Another factor affecting the interpretation of evaluation results is the type and quality of data used. Problems occur if data are used for evaluation simply because of their availability. It is often not known under what conditions such data were collected, whether data from several sources are compatible, whether definitions utilized were clear and consistent, or whether sampling techniques were adequate.

The Difficulty of Standardizing Treatments

In teacher education programs, the "treatment" usually takes the form of courses or other special experiences provided for students. Since most programs have relatively large enrollments, courses are offered in several sections or settings. It is immediately apparent that differences among instructional staff and environments create varying experiences for the students. Thus there are many treatments within any one "program." What, then, is truly evaluated when student gains are measured? How can quality be maintained across such variety within individual programs?

Difficulties Related to Student and Faculty Idiosyncrasies

When student or faculty actions, reactions, opinions, or achievement are utilized in evaluation, the evaluator faces the problem of differentiated perceptions of any given intervention. Dressel (pp. 116-18), examining areas of individual differences that influence reactions, identified personal response patterns, cognitive styles, and trait-treatment interaction. Haberman and Stinnett (pp. 158-60) described the reactions to academic programs of four groups, ranging from activists who prefer free electives to convenience-oriented students who view class time schedules as more important than course content. Many categorizations are possible; the point is that evaluation results can be skewed by student motivations and interests. One adjustment to this phenomenon is to measure student input characteristics that can be expected to affect the output of programs (Astin and Pamos, 1971, p. 736).

The Difficulty of Establishing Causal Relationships

Although relationships can often be shown between program activities and student gains or changes, it is extremely difficult to ascertain either the factors that caused the change or the portion of the change attributable

to the program, to input variables, and to other factors. From a technical standpoint, the evaluator must make every effort to anticipate extraneous variables that might affect output indicators. Until more and better research evidence links program variables to the performance of teachers graduated from these programs, educators' judgments about "quality" curriculum designs should be recognized as products of logical analysis and shared experience which must be confirmed by more rigorous evaluation.

Adequacy of Resources

The number of dollars invested in education is often used as an indicator of educational quality. Although the training of other professionals is financed more adequately than is the training of teachers, only inferences can be made about the most appropriate allocation of funds to purchase quality instruction, facilities, and equipment. There exists only sparse evidence concerning the relative impact of resource allocation on program quality.

Evaluation of Personnel Development Centers

In recent years schools, teachers, and parents have asked for greater involvement in the process of preparing teachers. One structure suggested for facilitating such involvement is the Personnel Development Center (Denemark and Yff, 1974). The problems associated with program evaluation in such consortial arrangements are compounded by the fact of multimembership. Planning and evaluation necessitate involving various groups, each with somewhat different values and goals.

These differences in orientation by Personnel Development Center members were categorized (Sagan and Smith, 1973, pp. 52-55) as "typical functioning profiles," based on a four-area framework (Haberman, 1973) that took into account the college of education, the community, the local school system, and teachers' organizations. Reaching general agreement on specific objectives, criteria, evaluators, and program components is a difficult task indeed. The difficulty is compounded by the need to gauge the quality of each component as well as the total program. An intermediate-step evaluation might be the analysis of organizational variables, such as structure, governance, and management procedures. Program evaluation can then occur when the functional arrangements have been worked out and each participant feels at ease in the cooperative enterprise.

Resistance to Change Based on Evaluation

The purpose of program evaluation is to provide information for decision making about the program. Often evaluation is carried out at the end of a project when it is too late for decisions regarding refunding or continuation. Ongoing teacher education programs require continuous feedback, with the focus on the day-to-day operation. Rather than providing unequivocal conclusions regarding the success or failure of a program,

evaluation of this type is more likely to result in data that lead to revisions and further testing (Suchman, 1972, pp. 63-64).

Changes suggested by evaluation are often difficult to implement because of restrictions on facilities, resources, and expertise. Tradition, emotion, and political considerations also hinder needed revisions. Nevertheless, quality control cannot be achieved without program evaluation, which compares what a program has done with what it should do.

C. FACULTY EVALUATION

Evaluation of faculty is an important and controversial aspect of institutional quality control. Proponents hold that evaluation is essential for enhancing institutional quality through identification of exemplary and inadequate performance. Opponents of evaluation doubt its functional influence on faculty performance and register concern over the tensions it fosters. Advocates refer to evaluation's effect of increasing research and scholarly writing and improving teaching and advising. Critics suggest that evaluation discourages faculty from making enduring contributions to the institution's programs by rewarding conspicuous activity in broader regional or national circles.

The Difficulty of Selecting Criteria

Attempting quality distinctions among faculty creates the problem of establishing suitable criteria for evaluation. There is lack of agreement not only on the characteristics of good teaching, but also on the connection among faculty characteristics, instructional techniques, and learning outcomes. Consequently, controversy surrounds both the broad conceptual framework for faculty evaluation and the more specific problem of justifying particular topics for evaluation (Meeth, 1976, p. 3).

Faculty Characteristics

Special Areas. Haberman and Stinnett (1973, pp. 137-39) suggest that diversity, specialization, and isolation are the primary characteristics of faculty engaged in teacher education. The multitude of departments, divisions, and subprograms in colleges of education indicates the broad range of areas and topics in which faculty members have developed proficiencies. These specialties provide the bases of instruction, research, and community service activities performed by the faculty. Having moved directly from doctoral programs to teaching positions, many college of education personnel have little background in public school teaching, a limitation that has precluded the broad base of experience providing understandings that span the spectrum of educational concerns.

Isolation. The relative isolation of department members from each other as well as from a variety of teaching levels is a direct consequence of diversity and specialization. The system rewards independent effort and individual success; team teaching, group research, and joint service efforts seldom are regarded as highly.

Effectiveness. Eble (1970, p. 9) identified five prime qualities of effective teachers: competence, caring, energy, imagination, and a sense of proportion. When professors rated each other and results were contrasted with ratings given by students, the qualities associated with outstanding teachers by both groups were: agreeable nature, stability, enthusiasm, and indicators of high cultural attainment (Isaacson, McKeachie, and Milholland, 1963, pp. 110-17). Although educators tend to agree about the components of effective teaching, they exhibit considerable divergence between knowing and doing. In any case, perceptions of effective characteristics may or may not relate to how well students learn from instructors with these characteristics.

Resistance to Evaluation

Many faculty members object to all formal evaluation, although they are continuously assessed informally by students, colleagues, and the public. Some believe that what goes on in the classroom is too complex to evaluate. Weaknesses of current assessment methodologies suggest that this argument may have considerable validity. Evaluation may force individuals to face up to professional deficiencies as well as to exhibit behavior consistent with institutional expectations rather than with personal or professional potential. Though evaluation measures are imperfect, scores can be interpreted with harsh finality.

Differences Between Institutional and Faculty Goals

Hindering accurate evaluation of faculty members is the possibility of disparity between individual and institutional goals. One instructor may feel strongly about attaining certain outcomes that are low on the priority list of another. Both sets of values may be at variance with institutional priorities.

Perhaps faculty evaluation should measure the kinds of outcomes and objectives for which the institution is striving (Clark, 1961, p. 37). The faculty must know whether the institution values superior teaching, scholarship, productivity in writing and research, dedication to the institution, a broad educational background, personal warmth, good personal habits, or a combination of these variables. Serious problems arise when administrators evaluate faculty in terms of administrative beliefs about faculty obligations (Gustad, 1961, pp. 194-95). Poor communication between faculty and administration compounds these assessment issues.

Purpose of Evaluation

Central to the whole idea of evaluation is the purpose for which the results are to be used. Techniques will vary between evaluation used as a basis for faculty self-improvement, and that used as a basis for decisions concerning academic rank, tenure, and salary. The purpose and use of evaluation results should relate directly to the precision of data and ratings that were utilized (Doyle, 1975, p. 81). Decisions that can seriously affect individual faculty must be based on scrupulous and rigorous methodology.

Institutional Rewards. College of education faculty find it difficult to correlate their efforts with traditional reward systems, which are based essentially on a research productivity model. As individuals and as specialists, education faculty have been required to function in a broad range of activities. Their teaching function operates both on and off campus, and duties range from the usual in-class lecture to practicum supervision in public school classrooms and counseling settings. Schools demand applied, useful research output rather than the abstract research associated with traditional disciplines. Traditional disciplines regard community service as a nonscholarly activity; for teacher educators, it is expected and essential. A reward system based on the traditional model is likely to discriminate against faculty who operate effectively in the broad range of activities expected of teacher educators.

Technical Difficulties in Evaluation

Methodologies. How does an evaluator unobtrusively observe the professional world of the faculty member? Methods commonly used (Eble, 1970, p. 3) to obtain data on teaching effectiveness are classroom visitation, self-appraisal, course materials and data, student opinion, recording devices (audio and video), and team teaching. Occasionally department chairpersons, deans, or colleagues observe in classrooms. Without a rating scale or outline of criteria, class observations provide only general impressions about an instructor.

Student Achievement. An additional method of evaluating teaching is to test the achievement of the students. Two difficulties characterize this type of assessment (Sawyer, 1962, p. 270). One is the inevitability of a lapse between the student's exposure to the teacher and evidence of student achievement. The other problem lies in establishing a link between the student's achievement and the contribution of the professor. Of greater significance is the need to establish a strong relationship between achievement in a teacher education program and subsequent success as a teacher.

Student Evaluation. Conditions relating to student evaluation of teaching should be controlled as much as possible (Doyle, 1975, p. 83) through standardized procedures. Among these should be uniform instructions for each class, statement of the purposes for which the evaluation will be used, assurance of confidentiality, and the noting of any special circumstances.

Multidimensional Approach. As the public and government become more intimately involved with college and university operation (particularly through the granting of funds), there will probably be increasing demands for institutions to furnish some evidence of the productivity and teaching ability of their staff. Administrative decisions concerning faculty will continue to depend on some kind of formal or informal assessment of professional and personal competence. In spite of continuing problems with selecting criteria, establishing objectivity, and overcoming a natural faculty resistance, some type of evaluation of teacher educators will be necessary.

Examination of evaluation requirements and purposes indicates that a multidimensional approach might be most functional because it allows for contributions from various sources. Errors inherent in each evaluative method may tend to neutralize those in others. Although objective data must be secured wherever possible, difficulties in establishing precise evaluative instruments and controlling all variables will necessitate a strong subjective component for some time to come. Combined, the various evaluative dimensions are likely to provide a broader, sounder, and more realistic approach than any single method or technique.

IV. A LOOK AHEAD

Future projections for anything as far-reaching as the career-long quality control process discussed in the preceding pages represent wishful thinking rather than careful extrapolations from available data. Perhaps, however, professional aspirations are as necessary to the improvement of American teacher education as is data analysis. Fortunately, we are not confronted with an either-or choice between these essential elements. Indeed, an expanded emphasis upon the clarification of objectives and upon a data base for decisions in teacher education represents projections both desired and apparent in current trends.

In the opening section of this paper a series of problems in assessing student outcomes were identified. A heightened appreciation of those problems and a capacity to deal with them will doubtless represent major emphases for the preparation and evaluation of teachers in the decade ahead. Areas of emphasis include:

1. An understanding of the social and cultural factors which influence learning as expressed through home, neighborhood, and peer environments.

2. The legitimacy and importance of multiple learnings, such as effective work habits, sustained interest in further learning, self-respect, and coping skill in handling problems resourcefully, as well as subject matter mastery.

3. The differential effect of student background characteristics on student performance in different curricular areas.

4. The need for multiple teaching styles in individuals and among teaching staffs to facilitate a more effective fit with important differences in the dynamics of learning among students.

5. Coupled with the flexibility and adaptability suggested above, teachers need a stability about their performance that supports consistent and progressive learning among students.

6. Understanding of maturity levels and human development principles sufficient to enable the teacher to design and implement learning experiences consistent with the maturity levels and insights of the students for whom the teacher has responsibility.

7. An awareness of the social realities of the school and community that permits the teacher to use them as reinforcers of learning where they have such potential and to minimize their negative or disruptive effects where they seem to counter instructional objectives.

8. An understanding of and capacity to utilize effectively the interactive relationship between student behavior and teacher behavior. Teachers need to understand that the ways in which

they play their roles and establish relationships with students may significantly influence the learning process. They need to recognize as well that student behavior influences teacher performance. Consciousness of these interactive relationships provides the possibility of managing them for constructive educational purposes. The alternative is a teaching-learning environment buffeted by personnel influences to which the teacher is largely insensitive.

A second projection for the future of teacher education with quality control implications is an expanded concern for the preparation of human service professionals functioning in a broad range of social agencies with educational objectives. As the CEPT Report (Howsam et al., 1976, p. 136) concluded, "a new kind of professional will have to be prepared to be highly experimental in helping approaches, diverse in skills and understandings, politically adroit in dealing with agencies and bureaucracies, collaborative in planning with clients, liberated from intractable role definitions, and affective in working with people." Quality control measures will need to be defined to guide both recruitment and training efforts in these directions.

Closer linkage of preservice education, inservice education, and continuing professional development, with greater clarification of the unique contributions of each, is a trend already discernible. Programs of graduate study in education are likely to be reconceptualized, as incentives are increased for advanced graduate study in areas relating to instructional specialties and careers as teacher-scholars are viewed as attractive alternatives to careers in school administration or college teaching.

The growing interest of teacher organizations in the professional preparation of new and continuing members will doubtless remain a source of tension with teacher educators, particularly as it is perceived to be motivated primarily by professional politics rather than a concern for rigorous professional standards. Undoubtedly, however, teachers will have a stronger voice in the quality controls associated with accreditation, certification, and continuing education programs.

Public demands for accountability, combined with the awakened interest of teachers and the press upon school systems and colleges for better utilization of resources, will continue and expand the already significant development of personnel development centers or other collaborative mechanisms for improving the education of teachers. As E. B. Smith (1974, p. 255) observed, "Partnership is the only way . . . to avoid a federal- or state-controlled education and teacher education system, and to avoid having teacher professional politics dominate entirely the course of curriculum development without input from the public and the scholarly community. It is the only way to avoid elitist, theoretical, and impractical training led by ivory-towered educationists."

Finally, as a result of public interest, legal challenges, changes in teacher supply and demand, and maturing professional responsibility, the standards and processes used to maintain quality control in teacher education will receive greater attention and clarification. Policies of open admission and minimum performance expectations will give way to more

rigorous but functional requirements for admission to and retention in teacher preparation programs and the teaching profession. The emphasis on improved quality controls is of vital importance. As Hawkins (1976, p. 192) suggested, "There is no threat to our existence greater than a threat to the process of education. If it were radically interrupted for a generation, we would die as surely as, and more quickly than, we would from gross genetic damage. Far more likely and not so easily diagnosed, would be an uneven attrition of education by which culture would reproduce itself on a gradually declining scale." The current stirring of interest in school improvement through the enhancement of teacher effectiveness suggests a promising countermeasure to such cultural decline.

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